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FEBRUARY, 1944



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**CONTAINERS FOR GASES, LIQUIDS
AND SOLIDS**



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PITTSBURGH EQUITABLE METER COMPANY
MERCO NORDSTROM VALVE COMPANY

JOHN W. SLOUGH
SERVICE ENGINEER

LET'S ALL GIVE THIS MAN

A Great Big Hand

Traveling men are today probably operating under heavier handicaps than any other group. With gas rationing, crowded trains and busses (more frequently than not running on late schedules), and hotel accommodations virtually unobtainable in many centers, these "ambassadors of the brief case" deserve a world of credit for carrying on in the face of many obstacles. They neither ask for or receive any special favors, but plug away bringing to their customers about the only thing many have to sell today—service.

Of course, a great number of our products are necessary and vital to the successful pursuit of the war. Other lines have been discontinued entirely for the duration. Selling, as such, is virtually a thing of the past, but engineering and technical assistance, particularly in maintenance and installation work, is very important. We have retained our entire staff, which has been carefully built over the years, to bring those in the field the maximum knowledge and experience in measurement and control.

Some of our service engineers have been temporarily transferred to other jobs in our organization, such as, expediting, engineering and manufacturing, where special talents could be best utilized in producing war goods. They have willingly sacrificed their personal desires in the interests of their Country. When Victory is won, they will again be assigned to their territories to call on old friends whose contacts they sorely miss. These men are now having a hand in writing the future. They deserve a big hand from all who know or have worked with them.



PITTSBURGH EQUITABLE METER CO.

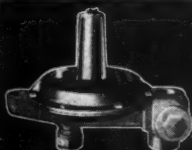
Also known as: MERCO NORDSTROM VALVE CO. Boston
Brooklyn Main Offices, PITTSBURGH, PA. Buffalo
Chicago Columbia Houston Kansas City
Los Angeles New York Pittsburgh
San Francisco Seattle Tulsa
National Meter Division, Brooklyn, N. Y.



Gas-Propane
Meter



EMCO Large Capacity
Pressed Steel Gas Meter



EMCO Type "B"
Ejector Service Regulator



ROTOCYCLE Meter for
Liquid Butane-Propane



NORDSTROM
Lubricated Plug Valve



BUTANE-PROPANE *News*

Reg. U. S. Pat. Off.



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For High Achievement



WE of Cribben and Sexton are proud and grateful for the high recognition accorded our war production accomplishments through the award of the coveted Army-Navy "E". We have striven with all our energies to produce on time, in quality and in quantity the war production tasks assigned us. This flag to us, is no mere symbol of past accomplishments. It is, instead, an inspiring battle standard to lead us to even greater achievements. War on the Production front has imposed a driving, imperative and seemingly insatiable demand. We take pride in the fact that Cribben and Sexton together with American Industry as a whole, has met—is meeting,—and will continue to meet that demand on time, and in the quality and quantity needed by our armed forces to insure a decisive and final VICTORY.

Cribben and Sexton Company
Peacetime Manufacturers of Universal Gas Ranges

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LETTERS

Gentlemen:

I notice in the December issue of BUTANE - PROPANE News, "LETTERS" on Page 4, a letter from F.R.F. about the flame leaving a burner when the oven is lighted.

I have had this trouble several times with stoves that have been set under a window ledge or some piece of built-in equipment that extends out over the stove. Several times, also, different pieces have been set on the back of a stove over the part where the burners are; this causes the heat to circulate through the holes in the back of the stove, coming up under the burners.

This should be called to the attention of the stove companies and could be remedied with a false back that would take its air from the bottom of the stove in back. Also, move stove out from the wall and remove any obstacle causing a forced draft through these holes.

EVERETT WEBB

Philgas Service
Warsaw, Kentucky

Thanks for telling us of your experience. It will be helpful to others, no doubt.—Ed.

Gentlemen:

I want to say that the December BUTANE-PROPANE News certainly came in handy a few days ago. I went to the ODT for a certificate and gasoline for a truck to be used in new operations. They stated that the ODT would not approve new operation of trucks. Frankly expecting this (no criticism of them), I carried BUTANE-PROPANE News with me and turned

to Page 19, showing the contents of your article.

The attendant never did find in his records where tank trucks were exempted, but he said he was sure the magazine was correct and issued the certificate.

If it had not been for the article in your magazine I would not have obtained the gas, due to my lack of knowledge of the rulings.

F.J.R.

Louisiana

We are gratified to know our magazine helped you. All orders from Washington affecting the industry are published promptly every month.—Ed.

Gentlemen:

I am making plans now to go into the butane business just as soon as the war and the government will permit. The only thing that I am afraid of is that the government will hold this progress back, keeping a new concern from being organized and placed into operation, that is, in obtaining tanks, etc., and that the present operating companies will get the cream of the coming business. If you have any information on this matter or have any good idea, I would appreciate hearing from you.

The nearest operating butane concern is about 60 miles from here and they go in for the big customers. I have in mind that there is a big field in the way of the small user, for cooking and refrigeration in the rural sections. This class of customer would only require small containers, say the bottle type container, holding approxi-

mately 40 to 50 gallons. As far as I know, the above concern does not have any type of containers and does not go in for this class of business. In talking to several of the rural people, they seem to be interested. I would appreciate very much if you would advise me whether or not you think that I would be successful; the concern making such containers, regulators, etc., and also any other information you can furnish.

I am in the market at the present time for a truck tank with a capacity of 1000 gallons (liquid capacity).

F.J.R.

Louisiana

The description which you give of the district in which you propose to establish yourself, and the absence of competition, seem to indicate that you could make a substantial success there.

There will be competitive fuels no matter where you locate, but LP-Gas can always hold its own with wood or coal or electricity because of its economy of operation, cleanliness and convenience.

We have been running a series for two-and-a-half years that is called the "Bottled Gas Manual," which discusses the competitive angles of all fuels and which gives dealers, salesmen and servicemen innumerable facts of value to guide them in their business. I am sure you would be interested in having this series when it is published in book form, which will be a couple of months hence. With "The Bottled Gas Manual" and our "Handbook BUTANE-PROPANE Gases," you would have all the foundational knowledge that is in book form for this industry.

We do not think you need to worry about the government restricting expansions of industry after the war is over. The only reason it is being limited today is to conserve steel and other essential products. You will find among the advertisers in the copies of BUTANE-PROPANE News which you will receive, many tank and cylinder manufacturers, as well as firms making regulators and all necessary equipment and appliances for household uses. You will also find names of manufacturers of tank trucks and storage tanks.—Ed.

Gentlemen:

We have been trying to locate a firm that makes gaskets for a butane-

propane storage tank gage glass and so far have not been very successful.

Through your advertisers from different firms we thought maybe you could help us out a little bit.

C. O. L.

Iowa

L. C. Roney, Inc., Los Angeles; Bastian-Blessing Co., Chicago; and Fisher Governor Co., Marshalltown, Iowa, undoubtedly can supply your needs. Give number of gasket and manufacturer's name when writing.—Ed.

Gentlemen:

The writer was very much interested in the article in the November (1943) BUTANE-PROPANE News on gas lighting.

We would appreciate your furnishing us with the names and addresses of some firm or firms who make gas lighting fixtures and mantles.

R.R.H.

Mississippi

We are pleased to give you the name of the General Gas Light Co., Kalamazoo, Mich., manufacturers of gas lighting fixtures and equipment.—Ed.

Gentlemen:

I would like information about butane-propane.

After the war will we be able to get butane-propane anywhere in the U.S., Canada and Mexico?

S.C.S.

California

There is no reason to doubt that these fuels will be available for civilian consumption after the war, and we think that there will be no undue shortage during the progress of the war. There may be temporary shortages of butane in some districts because of its application to the manufacture of synthetic rubber and aviation gasoline, but we do not look for any permanent shortage.—Ed.

• BUTANE-PROPANE News welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed.—Editor.

One Of These Days

By L. C. RONEY

President, L. C. Roney, Inc., Los Angeles

ONE of these days this war will end. That day may not be too far away and it is my honest opinion that a lot of us will be seeking a market for the products released for other customer outlets when this happens.

Furthermore, we are going to find our electric sales competition much keener, with an abundance of power to market and unlimited capital to proceed with any marketing program they may select.

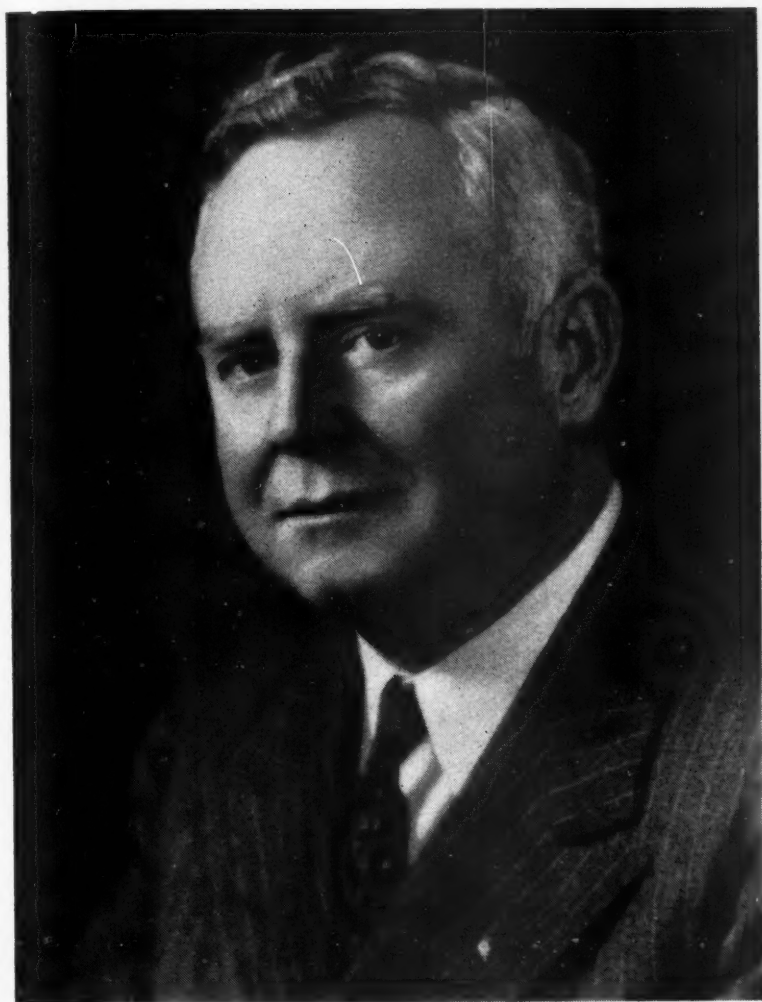
I am firmly convinced that a national as well as local advertising program should be instituted now by all interested in the progress of the liquefied petroleum gas industry, both from an industry and individual operator standpoint.

The Liquefied Petroleum Gas Association has adopted a very comprehensive publicity program from the national standpoint which will publicize the industry as it has never been publicized before and each and every one of us should get behind this 100% as the dividends to be collected in the postwar era will be tremendous. However, the success of the program depends to a very great extent on the support and full cooperation of each and every one of us in our industry.

The successful completion of this national industry advertising should lessen sales resistance, create tremendous sales volume after the war, and enlighten the public on the real job done by the industry in the war effort, as well as educating the public and the personnel of any control bureau under which we may have to function after the war of the importance of liquefied petroleum gas to the nation.

No industry in history has enjoyed the phenomenal growth we have, but our postwar growth will depend to a very great extent on how well we sell ourselves to the public.

The day to start has arrived!



L. C. RONEY
Guest Editor For February



One thing looks the same through every pair

THERE are a good many different views about what the future will bring in the cooking and heating appliance field . . . and how soon.

But one thing you can be *sure* of . . . no matter whether your view is through conservative bifocals or the most imaginative long-range shell-rims . . . you're going to find Estate *out in front* with the newest improvements, the most advanced features.

For you know that being out-in-front is a hundred-year-old habit with

Estate. First with the cabinet type circulating home heater . . . first with the table-top range . . . the barbecue type broiler and other major improvements . . . Estate will *continue* to give its dealers the advantage of being *first with the finest*.

Estate's postwar planning—both as to products and merchandising policies—is well on the way. When the word comes to switch from war work to peacetime production . . . Estate . . . and Estate dealers will be ready to start . . . *out in front*.

ESTATE

THE NAME TO REMEMBER IN COOKING AND HEATING APPLIANCES

Made by THE ESTATE STOVE COMPANY, HAMILTON, OHIO • House founded in 1842

MAINLY BEYOND THE MAINS

By ELLIOTT TAYLOR, Washington Editor

Tank Car Shortage—Again

Southern butane operators have just gone through the toughest and most trying five weeks in their history and if many of them now assume that whatever the future holds it can't be any worse than December and January, we are inclined to agree with them.

Analyzing the causes for the many temporary interruptions in service in that area to butane users might seem almost like a locking-the-barn-door-after-the-horse-is-stolen operation. But since the competition may be tempted to hold one of its traditional field days of misrepresentation over the situation, it is advisable that the LP-Gas industry have the record straight.

Of course everyone knows that it was a shortage of tank cars available to carry LP-Gas that was immediately to blame. The industry went into the winter of 1943-44 with a net loss of at least 500 tank cars, or a decrease in 25% of its combined fleet, as compared to the winter preceding the present one.

A year ago LP-Gas carriers

had on loan from the Rubber Reserve Corp. 250 cars, all of which were withdrawn from this service and put to the use for which they had been built, before the end of the summer of 1943. By the middle of November of last year 600 more LP-Gas cars had been diverted from industry hauling into the refinery movement of isobutane and butylene to speed up the aviation gasoline output. When winter closed in these cars had not been returned to LP-Gas service, as had been anticipated. These added to the Rubber Reserve withdrawals total a loss of 850 cars over the previous winter.

On the gain side, we can estimate approximately 100 cars built and delivered to a few producers and large distributors during the year 1943. The conversion program undertaken by ODT and financed by the Defense Plants Corp. has added another 200 or possibly 250 cars to the combined LP-Gas fleet; the ultimate goal of this program which got off to a remarkably slow start is 1000 converted cars that will be suitable for butane. Thus, with 850 cars

lost to the normal butane and propane service, and only 350 gained, the industry stood at the first of the year at least 500 cars on the bad side of the transportation ledger.

The reasons for the shortage are all summed up in the great covering statement that this is War and what are you going to do about it. Certainly we agree that nothing can be done about the fact that when more aviation gasoline is required the army is going to have it, and in any quantities asked for up to the limit of the industry's physical capacity to produce and ship it to the fighting fronts.

We believe that the refinery division of PAW may have been remiss in not more accurately anticipating the foreseeable demand for more rolling stock, particularly for the refinery movement of isobutane; but this is at best only our personal opinion.

We believe, also, that the producers of LP-Gas have not been as completely cooperative as an enlightened industry interest would indicate in making the most efficient use of the cars that were available. There has been too much of a tendency on the part of a few producers to take care of their own accounts at all costs, holding idle cars as a margin of safety, and resisting by devious means any attempts to keep them rolling in the service of the entire industry. This,

too, we assume, is war, but internecine strife is a doubly dangerous preoccupation when the nation is itself in armed conflict.

The butane transportation situation is now improving; slowly, to be sure, but all indications are that by the middle of the month of February its acute aspect for the present winter will be past. Then, with a few months for the ODT conversion program to get into at least second gear, we believe that the industry can look forward to some easing of the stringent shortage that presently prevails.

Lessons

It apparently takes more than just a solemn warning to jar some sense into both government and industry and we are convinced that the experiences of the past few weeks will leave some lessons that both can learn to their advantage. The refinery division of PAW, for one, might learn to consider the ultimate, instead of the immediate, effect on the entire petroleum picture of snatching cars from one service and placing them in another. And it might learn to rely more on the recommendations of the LP-Gas section of its own administration when the question of requisitioning pressure cars has to be faced. The ODT might learn that there is more to the job of converting

a thousand tank cars from gasoline to butane than just announcing that the program has been undertaken. If pressure relief valves were the bottleneck, as we have heard, the ODT certainly should have been able to foresee that. After all, every agency in Washington seems to be busy coordinating something with everything else, and it is to be assumed that the ODT knows its way around the WPB by this time. Unless they expected the tank car companies to get the fittings from some local plumber.

Shippers of butane and propane who adopted the attitude that the cars were theirs, to do with as they pleased have probably been softened up a little by having some of their rolling stock taken out of their own service and put at the disposal of a competitor whose urgency was greater.

Distributors and dealers who have complained bitterly and at great length because their applications to make new installations have been consistently denied by PAW may now realize that there is some relation between the number of customers they have, and their ability to keep those customers supplied, in winter as well as in summer.

If, as we have often heard, experience is the best teacher, we are of the opinion that the

entire butane industry has had what amounts to a liberal education complete from freshman hazing to senior graduation within the past 40 days. With a little postgraduate work thrown in for some of the government agencies that, of course, started out knowing all there was to know about everything.

Vermin

We have heard rumors of instances in which an unscrupulous dealer has taken advantage of a competitor's temporary shortage of butane to attempt to pirate his customers on the promise that the bandit company, being "better connected" with suppliers would be able to guarantee uninterrupted service. We are reluctant to believe that such a condition even exists; we are confident that it is not widespread practice. Such a conception of business ethics would shock the sensibilities of a burglar.

Should such an incident occur, our advice to the injured dealer is that he immediately communicate the full facts in the case with names, date and place to the LP-Gas division of PAW. Were we not determined disciples of the principles of law and order, we would advocate the auxiliary application of the horsewhip while the data was being compiled.

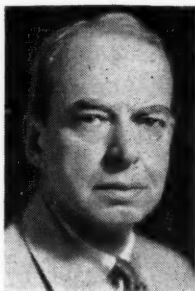
Heat Control Is Key To Profit In Commercial Cooking

By W. D. CROUCH

Manager, Commercial and Industrial Division
Robertshaw Thermostat Company, New York City

NEVER before in the history of this country has the need for the conservation and saving of so many items used in our daily life been so vitally important as it is today. America and all free lands as well as many enslaved and overrun countries are struggling for their very lives and freedom. These facts cannot be told too often—nor too emphatically—to bring home to each of us the need for avoiding waste of any article, regardless of its value, that might be needed for the promotion of the war and the speedy victory to come.

Just a few years ago, in 1939, none of us visualized that in 1942 we would be rationing food and doing without those things which were thought by all of us to be inexhaustible. Nor had we learned the grave necessity for saving fuel. Yet, food and fuel are as important as the munitions used by the armed forces, and we are finally learning—the *hard* way—how very precious



W. D. CROUCH

MEAT ROASTING TIPS

Shrinkage is difference in weight of meat before and after roasting.

Excess shrinkage reduces palatability, juiciness, tenderness and flavor.

Correct oven temperature gives cook complete control over shrinkage.

Low temperature method uses less fuel, causes less spattering and smoking. With less spattering, ovens, pans and racks are more easily and quickly cleaned.

they are. We might do well to take for a slogan "Give us this day our daily bread," to which should be succinctly added, "and the fuel with which to bake it and keep us warm."

But, the proper *kind* of fuel must be used, or all talk of food-saving is pointless. It is no secret that in order to cure an ill you go to the point of origin, provided you recognize it. In the case of present-day food ills we easily find one cause to be out-dated equipment, improperly fed by costly fuels. And the cure may be effected by the conversion to modern appliances, thermostatically controlled, and supplied by efficient, modern fuels.

Generally speaking, waste of food occurs in many ways, a few of which are carelessness in preparation; insufficient cooking or over-

fit

cooking; improper refrigeration which increases spoilage, etc. Specifically, the prevention of spoilage and waste can be accomplished in some of the following fashions:

COMMERCIAL, OR VOLUME COOKING

1. Use of efficient equipment, each appliance carefully selected for the work it is to do.
2. Careful preparation of food in order to be sure of obtaining the best possible results and of serving a healthful, palatable and strength-building diet.
3. Maintenance of the correct temperatures for each item of food. Too much heat is just as wasteful as not enough. Both destroy food values.
4. Serving of food in the proper portions. Enough but no more, as any surplus, even though small, is a waste.
5. Saving of all fats that otherwise would be thrown into the garbage can.

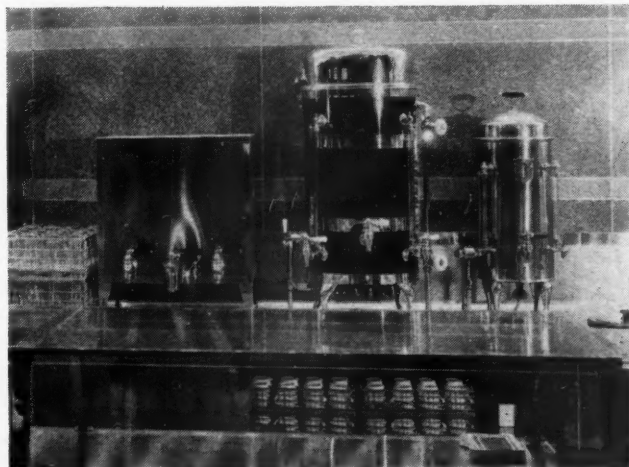
To be able to convince a prospective customer of the necessity for replacing equipment no longer efficient, due to long usage, lack of insulation, poorly designed burners, warped doors, and shelves, a commercial salesman should have complete information concerning the

advantages and economies that are obtainable by the purchase of efficient and modern, thermostatically controlled appliances.

Data setting forth the actual return, in dollars, because of reduction in fuel used, prevention of spoilage and waste of food, loss of time and, at the same time, obtaining much more uniformity in results is available from the various appliance manufacturers. This data is valuable and well worth studying and memorizing.

A commercial salesman can render his customers a very valuable and worthwhile service by making a survey of the appliances in use and pointing out the items that require correction, or replacement. Many operators of kitchens have but little information, or knowledge, concerning the economical way to use fuel, and the salesman that can and will show these things will create not only a good customer, but a staunch friend. The way to

▲
One of three thermostatically controlled coffee urns in a large cafeteria. They provide five gallons of coffee every 20 to 25 minutes.
▼



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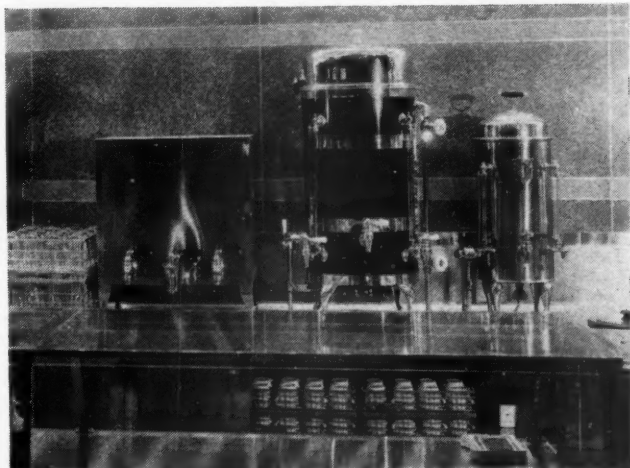
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One of three thermostatically controlled coffee urns in a large cafeteria. They provide five gallons of coffee every 20 to 25 minutes.
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a customer's heart is through his pocketbook. Show him how to cut costs and increase profits and he becomes a good friend for as long as he is in business.

The commercial field offers tremendous opportunities to LP-Gas men, ones often neglected in the past. There are many operations in every community that have need for expert advice and competent service—such as restaurants and hotels, hospitals, stores, laundries, barber shops, turkish baths, wash racks, and numerous others, all needing large quantities of hot water and space heating, but let us confine our thoughts for the moment to the kitchens and serving rooms of restaurants, hotels and hospitals. Remember, however, that in all commercial operations, as

well as domestic uses, the highest efficiencies and greatest economies are obtained by scientific control of heat.

First, let us consider some of the fundamentals back of successful commercial cooking, and guides to attain that objective:

Gas Ranges. The backbone of our diet is meat. Yet, countless pounds are wasted every day by shrinkage which can, and does, amount to 10% or 12% because of faulty heat control. This high shrinkage means that a large percentage of meat is going up the flue in smoke, when it could be going to use on a platter. Excess shrinkage reduces palatability, juiciness, tenderness and flavor, all unnecessary if a sensible, low temperature method is followed. Low temperature cooking



This battery of heavy duty ranges is in the Lido Beach Casino, Sarasota, Fla. They are supplied with LP-Gas by Green's Fuel, Inc., of the same city.

TABLE 1. MEAT-**SAVING** "TIME AND TEMPERATURE" ROASTING CHART

ROAST	Approximate weight in pounds	Oven temperature in degrees F.	Approximate minutes per pound
Beef	20-22 lbs. (7 ribs)		12-15 rare
STANDING RIBS	Trimmed, chine bone and short ribs removed	300-325	17-20 medium 22-27 well-done
ROLLED RIBS OR BONELESS ROAST	15 to 17 lbs.	300-325	Add 10 min. per lb. to above time
RUMP (boneless roll)	8 to 10 lbs.	300-325	30
Veal			
LEG	7 to 8	300-325	25
LOIN	4½ to 5	300-325	30-35
RACK (4-6 ribs)	2½ to 3	300-325	30-35
SHOULDER	6-7	300-325	25
SHOULDER (boneless roll)	5-6	300-325	35-40
Lamb			
LEG	6-7	300-325	30-35
SHOULDER	5-6	300-325	30-35
SHOULDER (boneless roll)	4-5	300-325	40-45
Pork			
LOIN	12-15	350	20-25
FRESH HAM	10-14	350	30-35
SMOKED HAM (Tendered)	10-14	325	18-20
SPARERIBS (1 side)	1½ to 2½	350	1½ hr. total time
Poultry			
CHICKENS	3½-4 lbs. stuffed	325	40-45
	4-5 lbs. stuffed	325	30-35
	Over 5 lbs. stuffed	325	30-35
	6-10 lbs. stuffed	325	20-25
TURKEYS	10-16 lbs. stuffed	325	18-20
	18-26 lbs. stuffed	325	16-18
GEESE	Same as turkey		
DUCKS	Same as for heavy chicken		

causes less spattering and smoking and saves up to 20% in fuel consumption, according to recent tests. Heat should be measured and regulated. In dollars and cents it means money saved and many more servings. Table 1, illustrating this point and showing a time and temperature chart for roasting meats, is the result of carefully applied practice.

And here are some final points:

1. Be sure burners are clean and properly adjusted.
2. Keep linings, shelves and racks clean.

3. Cut heat to minimum at off-peak hours.
4. Load ovens to capacity when using.
5. Don't use two ovens when one will do.
6. Have equipment checked frequently.

Bake Ovens. Baking is an art as well as a necessity. And the baking of bread has been a very real necessity ever since the days of the first, crude cave-oven. Fortunately, for us, modern science has revolutionized the task of baking. Today, a compact, modern appliance, thermostatically controlled, can mean the difference between wasteful burning and successful baking.

Heat controlled ovens end guesswork. They assure quality products and every cubic foot of gas can be thriftily utilized. General instructions for correct oven operation include:

1. Heat oven thoroughly and evenly.
2. Load decks evenly and keep them clear of products.
3. Open doors as seldom as possible to avoid loss of temperature.
4. Clean oven interior daily.
5. Keep burner door opening clean so that it closes tightly.
6. Have oven inspected periodically.

Here are some points on the proper use of heat control: The

thermostat dials are divided into degrees from 100° to 600° or 200° to 600°, etc. When starting oven, the dial should be set at oven heat wanted. Heat control will automatically cut down the fuel flowing to oven when the temperature reaches or exceeds dial setting, and automatically turn the fuel on when temperature drops below dial setting. Ovens take time to heat up and cool down. A few minutes spent planning "bakes" will eliminate a lot of "cooling." Bake either "up" or "down" as recommended by the manufacturer.



Commercial bake ovens for large scale operations. Heat control is needed no place more than in baking.

Deep Fat Fryers. Deep fat frying is an increasingly important item in our national diet. However, without the benefit of a dependable thermostat most of our fried foods would be unfit for human consumption. Frying is a precise science. Excess temperatures cause burning and waste of valuable cooking oil; insufficient temperatures cause indigestible, soggy food, spoilage and even more waste. Deep fat frying affords the most profitable means of cleaning up leftovers in the form of patties, croquettes and other appetizing dishes. Here are some excellent reasons for changing over to controlled heating:

1. It stops the guess-work and the waste. Consequently, there is an immediate pick-up in the profit from fried food sales.
2. It cuts operating costs.
3. It saves fuel because the heat is automatically shut off when the right temperature is attained. Reported savings on gas run as high as 40%.
4. The kitchen is kept cooler.
5. It prevents overcooking, keeps fat clean longer, and above all, prevents smoke. Smoke means danger—and waste—for it comes from fat that is destroyed by intense heat. Chefs report that the life of compounds is actually doubled by installation of fryers equipped with proper heat control.

Some general rules to adhere to are: Fat must be hot so food is cooked quickly and crust formed outside. When not hot enough grease soaks into food before crust is formed. Fat must not be heated to the smoking point. Overheated fat will scorch food and leave center raw. Before frying, food should be free from excessive crumbs and an excessive amount of moisture. For uniformity, pieces of similar size should be fried at the

same time. In general, small pieces should be fried at higher temperatures than large pieces. Food should be served immediately after frying.

Steam Tables. To date, the most neglected appliance in a cafe, restaurant or commercial kitchen is the steam table. The practice of turning on the fuel and forgetting it causes much waste of food—overcooked, dried out, unpalatable. Insufficient heat renders food clammy, cold and tasteless. It has been proved that thermostatically controlled steam tables consume 10% to 60% less fuel than any others. Here are some facts for all steam table operators:

1. When food is served at counters or nearby tables, thermostats should be set at 185°.
2. When kitchens are 100 feet away thermostats should be set at 200°.

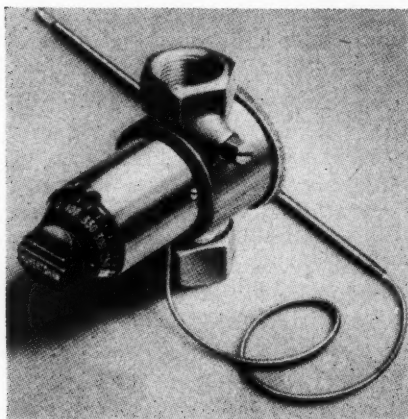
Steam tables must be kept clean and properly adjusted . . . kept free of carbon and deposits, coils and traps functioning properly. Profits will not escape from steam tables utilizing the modern system of thermostatic control.

Coffee Brewers. Like baking, coffee brewing can be a scientific success or a heat-caused failure. "The best coffee in the state" may well be the best blend obtainable, but it may also follow that the final product is not fit to drink. It is quite an easy matter to spoil a quantity of coffee. Good coffee can be ruined by incorrect proportions of water to coffee; become very bitter because of varying temperatures—cooling, heating, cooling, etc.; spoiled by admitting a considerable amount of cold water to

the water compartment after the coffee is brewed, which chills the coffee and makes it necessary to re-heat it, thus increasing acidity and coffee waste. Experienced chefs and suppliers of foods and beverages have laid down the following fundamental rules for brewing coffee:

1. Buy freshly roasted and ground coffee of a good quality.
2. Use correct proportions of coffee and water.
3. Maintain correct temperatures.
4. Insist upon immaculate cleanliness of equipment.

Kitchens using thermostatically-controlled coffee urns report coffee savings up to 22%, cream savings up to 18%, fuel savings up to 28%. Until served, coffee should be kept at a temperature between 185° and 195°. What 10° leeway can be maintained without a reliable heat control? When a fast turnover of



A flexible couple type of Robertshaw thermostat for bake ovens. Equipped with non-clog by-pass that regulates the minimum burner flame. It has double-seat valves for any burner capacity.

counter seats means added profits, then speed is essential. For faster service—no waste, lower costs, and coffee-with-a-flavor—the best insurance is heat-controlled equipment.

Dish Washing. As important as the food served upon them to the customer are the dishes, cutlery and glassware coming out of every kitchen. The time is past when food can be served on unclean, unsterilized plates; when knives and forks are acceptable, even at counters, with specks of food still cling-

LP-Gas has an exceptionally high Btu. value per cubic foot, or per pound, and to avoid waste and needless additional cost, burners should be carefully adjusted by a competent service man.

A periodical checkup of burner adjustment, thermostats and piping connections is advisable to reduce fuel cost and consumption to the minimum.

Adequate ventilation for admitting fresh air for combustion and for removing fumes is necessary to insure the best results.

ing to them; when smudged glasses will escape the notice of the most easily pleased patron. People are becoming "germ conscious"; they know the dangers of bacteria.

City, county and state health officials have begun a campaign against contamination and disease, and today many cities and states have rigid laws governing the sterilization of cooking utensils, and laws which also cover the personal cleanliness of employees. Experiences of the army, navy and maritime commission have proved that the spread of communicable diseases can be reduced, and con-

trolled by the proper method of dish washing.

Thermostatic control of water temperature insures sterilization at the lowest cost. For efficient sterilization, tableware should be immersed in clean water heated to 160° F., or more, and maintained at that temperature from five minutes at 160° to one-half that time at 200°.

Wash water should be kept at a temperature not exceeding 130°. Water hotter than this tends to bake food particles on the dishes. The rinse water should be 180° or more to sterilize properly and to give fast dry with minimum water spotting. Hotter water represents fuel waste; cooler water, time waste.

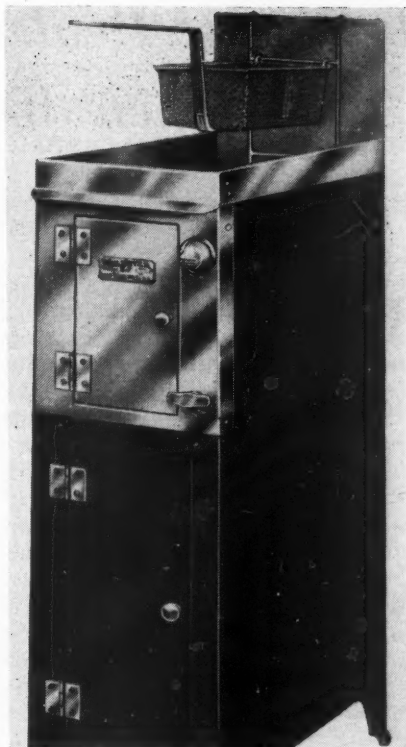
A special sanitary code as set down by the New York World's Fair reads:

"The term 'properly cleaned' shall be taken to mean the cleansing after each use of all utensils, including knives, forks, spoons, plates, etc. used in the preparation, service or sale of any food or drink in a solution of soap or soda or suitable cleansing powder in hot water followed by a thorough rinsing or spraying or immersion in clean water of 200° for a period of 30 seconds; or in hot water of a temperature not less than 175° at all times for a period of one minute; or by treatment by live steam in an enclosed compartment for five minutes; or by some other equally effective method approved by the Department of Health of the City of New York."

Advantages Are Numerous

Thermostatic control means daily saving, much less breakage, fewer towels, smaller stock of dishes and, most important of all, patron-protection.

The phenomenal increase in use of liquefied petroleum gas since its beginning, in 1910, is a telling



A deep-fat fryer, with cabinet.

tribute to its value and the men who pioneered its use, and its production and distribution today is one of our most important industries. Appliance manufacturers are prepared to supply specially designed equipment that can be used everywhere for ranges, ovens, water heaters, furnaces, etc.

These are a few of the salient points in the picture of commercial cooking. There is a vast, potential market for the increased use of LP-Gas and the sale of more efficient appliances.

Butane Dealer Finds It Easy To Compete With Coal and Oil

By C. D. SCHMITZ

Schmitz Appliance Company, Lamar, Missouri

FIVE YEARS AGO I introduced butane gas for heating, cooking, hot water and refrigeration in the territory surrounding Lamar, Mo. Having sold kerosene refrigerators here several years before, I have been continually confronted with such difficulties as poor grades of kerosene, service calls on account of coal and wood stoves overheating the kitchen, causing refrigerators not to operate properly, etc. It seemed that everyone was complaining about having to use such old methods for housekeeping. And this, of course, opened the doors for butane sales.

Converting kerosene refrigerators to gas is now one of my best sales leads. The initial cost of the refrigerator has been forgotten and it is music in the customer's ears to hear that the kerosene can be changed over for a few dollars when they buy a butane gas system.

I have found by keeping close records on butane consumption of the first few systems installed, that it compares favorably with the cheapest grade of coal sold in this territory. They could get coal put in their bins for \$2.75 per ton. Butane sounded high to the first customers when they were told that the cost of butane compared to \$5

or \$6 a ton coal; but after they found out that the wall paper, painting, curtain and rug cleaning made their bill amount to several dollars each year, it was not such a hard problem to convince them that they could buy butane systems, have the modern conveniences for their entire needs, and be out only their initial cost. Then in 10 years the system would pay for itself and be ready for another 10 years of service.

A good comparison between coal and butane is in a small town in this county. Coal is mined within one-half mile of the town. There are seven stores on the main street and four of them are heated by butane gas. The system is a 1180-gallon tank installed next to the alley. The bank and one store are metered, and the other two stores are adjoining, and all are heated with the suspended type heaters. The owners are pleased with the system and claim the stocks of merchandise do not get dusty and fade as they did when coal was used. The coal they used was always gradings or slack. Their cost for heating averages with the cost of a good grade of coal.

It would not be possible to compare operating costs if a dealer did

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not put out a good quality of merchandise instead of quantity. This is easily taken care of by having a No. 1 and No. 2 grade of stoves, heaters, and ranges. I have a few No. 2 systems out and the operating cost is considerably higher than the first grade. In particular, two homes here in Lamar are the same, but the one party did not want to spend the difference for a better grade of heating appliances. In the three years that these two plants have been in operation, the cost has been \$25 per year cheaper in favor of the first grade plant. Some of the five and six room homes are operating for as low as \$62 per year for heating, cooking, and water heating.

An apartment house with four

rooms and bath to each apartment is running the entire year for \$55 each. This consists of heating and cooking and is being checked each month with meters.

The Rural Electrification Authority is run extensively throughout this territory. It has created more interest in conveniences and modern equipment and has also helped the farmer to have electrically controlled heating systems. The current frequently fails during electrical storms. Butane brooders go right on doing the job when the electric brooders are off.

The story of LP-Gas can always be told truthfully if told in the proper way. Give your customers your best and they will more than compensate you for your efforts.

▲
Tank truck of the Schmitz Appliance Co., Lamar, Mo. The bulk plant of the company stands beyond and above the tank truck.





Meeting of the Board of Directors of the Liquefied Petroleum Gas Association, Dec. 13, Palmer House, Chicago, which unanimously approved publicity program for 1944. Among those present were, left to right: Walter Miller, Hamler Boiler & Tank Co.; A. L. Lutz, The Protane Corp.; J. Woodward Martin, Lone Star Gas Co.; Jerry Brennan, Warren Petroleum Corp.; P. A. Anderson, Utilities Distributors, Inc.; W. T. Joplin, Butane Corp.; Ellsworth L. Mills and John W. Green, The Bastian-Blessing Co.; Miss Florence Jacob, acting secretary, LPGA; Louis Abramson, Jr., Petrolane Gas Corp.; Walter Namer, Pyrfax Division, Carbide & Carbon Chemicals Corp.; Frank Boice, Shell Oil Co., Inc.; Herman Morler, Pressed Steel Tank Co.; John Locke, Northwestern Blaugas Co., L. C. Roney, L. C. Roney, Inc.; Harry K. Strickland, Indiana Gas Corp.; Carl Sorby, George D. Roger Corp., and E. D. Garoy, Illinois Bottled Gas Co.

LPGA Enlarges Executive Board

IN RECOGNITION of widespread urging by the membership of the Liquefied Petroleum Gas Association, the executive board at its Dec. 13-14 meeting in Chicago voted to increase the number of directors by the addition of the chairmen and vice chairmen of the four territorial sections.

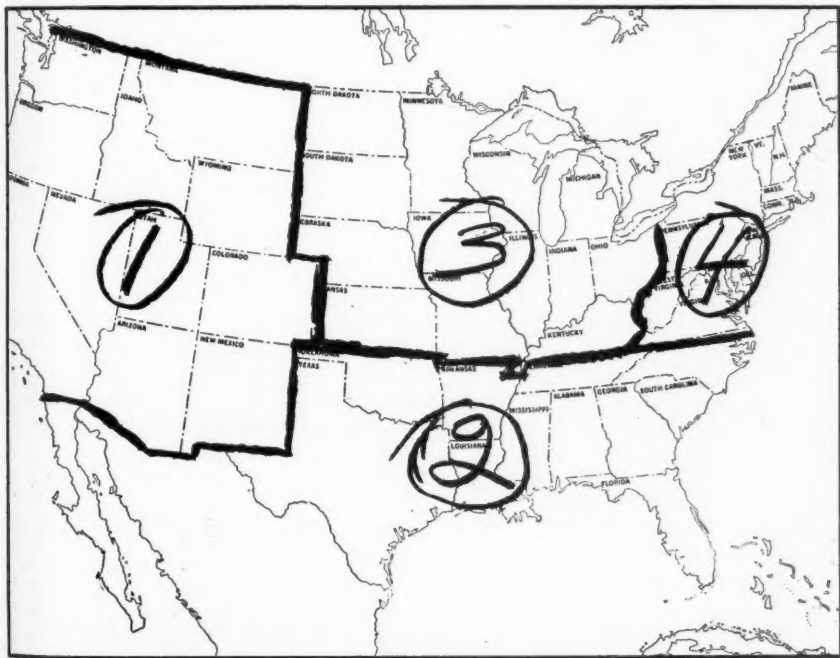
It is believed this will give all localities ample representation on the board to assure members that

their local problems will have full consideration.

While additional sections were not created, pending the ending of the war, divisional lines of the existing four sections were altered in accordance with the marked map below.

For two days previous to the executive board meeting, the technical and standards committee held session.

There will be no annual meeting of the association this year, usually held in February, because of war conditions and difficulties of travel.



This map shows the changed territorial divisions of the four LPGA Sections.
1—Pacific Coast; 2—Southern; 3—Midwest; 4—Eastern.

TABLE 1. MARKETED PRODUCTION OF LIQUEFIED PETROLEUM GAS

Year	TOTAL SALES		Distribution—Gallons Per Year			Per Cent Increase Over Previous Year		Per Cent Increase Over Previous Year		Per Cent Increase Over Previous Year	
	Gallons Per Year	Per Cent Increase Over Previous Year	Domestic	Per Cent Increase Over Previous Year	Industrial and Miscellaneous	Per Cent Increase Over Previous Year	Gas Manufacturing Previous Year	Per Cent Increase Over Previous Year	Per Cent Increase Over Previous Year	Per Cent Increase Over Previous Year	Per Cent Increase Over Previous Year
1922.....	222,641	...	2,600,000	....	400,000	....	1,500,000	....	1,500,000	....	....
1923.....	276,863	24.4	5,900,000	126.9	1,500,000	275.0	2,500,000	66.7	2,500,000	66.7	....
1924.....	376,488	36.0	11,800,000	100.0	2,200,000	46.7	4,000,000	60.0	4,000,000	60.0	....
1925.....	403,674	7.2	15,294,648	29.6	7,171,686	226.0	6,303,242	57.6	6,303,242	57.6	....
1926.....	465,085	15.2	16,244,108	6.2	8,167,194	13.9	9,703,470	53.9	9,703,470	53.9	....
1927.....	1,091,005	134.6	16,625,588	2.3	13,987,095	71.3	8,818,325	14.3	8,818,325	14.3	....
1928.....	4,522,899	314.6	17,681,000	6.3	32,448,000	182.0	6,293,000	24.3	6,293,000	24.3	....
1929.....	9,930,964	119.6	21,380,000	20.9	47,894,000	47.6	7,581,000	20.4	7,581,000	20.4	....
1930.....	18,017,347	81.4	30,014,000	40.4	67,267,000	40.5	9,371,000	23.6	9,371,000	23.6	....
1931.....	28,769,576	59.7	40,825,000	36.0	89,402,000	32.9	11,176,000	19.3	11,176,000	19.3	....
1932.....	34,114,767	18.6	57,832,000	41.7	94,983,000	6.2	12,386,000	10.8	12,386,000	10.8	....
1933.....	38,931,008	14.1	87,530,000	51.3	120,615,000	27.0	15,435,000	24.6	15,435,000	24.6	....
1934.....	56,427,000	44.9	134,018,000	53.1	159,153,000	32.0	20,286,000	31.4	20,286,000	31.4	....
1935.....	76,855,000	36.2	220,722,000	65.0	216,875,000	36.8	25,255,000	24.4	25,255,000	24.4	....
1936.....	106,652,000	38.8	299,559,000	36.0	201,477,000*	16.7*	31,366,000	24.0	31,366,000	24.0	....
1937.....	141,400,000	32.7	350,000,000	17.0	246,000,000	22.5	39,000,000	24.0	39,000,000	24.0	....
1938.....	165,201,000	16.7									....
1939.....	223,580,000	35.3									....
1940.....	313,456,000	40.2									....
1941.....	462,852,000	47.7									....
1942.....	532,402,000*	27.0*									....
1943.....	635,000,000†	19.0									....

* Not including 52,904,000 gal. used for chemical manufacturing.

† Chemical manufacturing consumption not included.

Remarks: In the above table, "Total Sales" for all years except 1943 were obtained from U. S. Bureau of Mines reports, "Distribution," for the years 1931 to 1942 inclusive, was obtained from the same source. All other volumes are estimated by the writer. The total sales volume includes all liquefied petroleum gases (propane, butane, and propane-butane mixtures) when sold as such. It includes the sale of pentane when sold for any purposes, Inter-company sales transactions, such as purchases of liquefied petroleum gases by one company from other companies and then resold as liquefied petroleum gases, have been eliminated in order to avoid duplication of sales figures. The data do not reflect sales of liquefied petroleum gases used directly by the producer at the point of production, for fuel, polymerization, solvent de-waxing, etc. Neither do the figures include sales of hydrocarbons to chemical plants or to plants manufacturing synthetic rubber or aviation gasoline or their components.

Industry Grows In 2nd War Year

MARKETED production of liquefied petroleum gases for fuel and miscellaneous purposes is estimated to have increased 19% in 1943 over 1942 to 635,000,000 gal. This estimated increase of 102,600,000 gal. is made on a different basis than in this author's previous annual reviews. Details of the estimate are shown in Table 1 on the opposite page.

Changes in the industry made it appear desirable to modify former methods of reporting marketed consumption. Heretofore estimates included LP-Gas used in chemical manufacturing only when delivered in liquid form. Deliveries in gaseous form by pipe line from oil refineries and natural gasoline plants were not reported. This year all LP-Gas used in chemical manufacturing has been eliminated from the estimates.

In 1943 there was an unusually large increase in consumption of LP-Gas by chemical plants. Estimation of the amount used, however, is made difficult by duplications arising from inter-plant movement for partial processing.

In general, it may be said that rubber and aviation gasoline consumed rapidly increasing quantities of butanes and propane, particularly in the last half of 1943. Twelve butadiene plants charging butane and butylene were com-

- Presented here are pertinent excerpts from a paper entitled, "Liquefied Petroleum Gas in 1943," prepared by G. G. Oberfell, vice president in charge of research, of the Phillips Petroleum Co., Bartlesville, Okla., who prepares an annual industry review. Official government figures of 1943 marketed production do not become available until mid-year.—Editor.

pleted and placed in operation in 1943. Synthetic rubber output increased more than tenfold between the first and fourth quarters, from 10,486 tons in the first quarter to 123,300 tons in the fourth quarter.

For several years the relative volume of propane sold for LP-Gas purposes has increased and the relative volume of butane has decreased. In 1943 this trend was accentuated.

Domestic installations at the close of 1943 are estimated to total 1,900,000. This is an increase of 75,000 over last year's estimate. Part of the increase was due to correction of the previous estimate and part to new installations. About 5000 new buried tank installations were made in the south.

When steel once more is freely available, it is expected that there will be a considerable increase in the use of propane or butane for cold carburetion. Plans are known to be afoot for conversion of a number of town gas plants from manufactured gas to butane-air or

propane-air or undiluted propane after the war.

Use of liquefied petroleum gases by public utilities for gas manufacturing continued to increase at the rate of about 24% per year. Gas utilities have been confronted with unprecedented demand from war industries and domestic consumers.

Eight typical glass manufacturing companies had a prewar annual consumption of 770,000 gal. of liquefied petroleum gases. For the past two years these eight companies have consumed 2,975,000 gal. per year. The companies in question were not converted from other fuels to liquefied gases; so the increase largely reflects the expanded production.

Transportation has been a major problem of the industry in 1943. Additions to the fleet of pressure cars included 431 new propane cars, 110 new butane cars and 183 natural gasoline cars modified to permit transportation of butane. Many of these new and modified cars were not delivered until late in the year. The industry could have supplied additional quantities to utilities and other industries had it not been necessary also to provide transportation for large volumes of butane, butylenes and isobutane for the aviation gasoline program.

The shipbuilding industry is an outstanding example of the use of liquefied gases to speed war work. It has been said by shipbuilders that propane has done more than

any other product to speed the fabrication of ships. Propane has been used to augment and in many places to supplant acetylene for metal cutting operations. With oxy-propane torches cutting speed has been increased materially. The kerf is much smoother and thus does not require a grinding operation. The amount of slag to be removed is negligible.

In other operations replacement of fuel oil with liquefied gases has speeded preheating of plates and pipe for bending. With propane it is possible to keep work clean by eliminating carbon deposit and localizing heat. This is particularly true in Van Stoning operations. Other applications where propane has helped improve working conditions and reduce heating time include core baking, lead melting, forging small parts, submerged combustion in pickling baths, rivet heating, rivet washing, die casting operations, and many types of heat treating.

The manpower situation in the LP-Gas industry, as well as in all other industries, considered essential to the war effort, has been critical. The war manpower commission has recognized the industry as being essential, resulting in some technical and key employees being granted occupational deferments for limited periods of time.

To cooperate with the government in the complete utilization of all available manpower, the industry has ceased all retail sales activities for the duration of the war.

Service work has been reduced to a minimum. Women are being used widely in jobs normally held by men.

Ten new natural gasoline plants begun since the war were put into operation in 1943 to increase materially the available supply of liquefied petroleum gases. Production was increased also by substantial additions to previously existing plants. Butane fractionating columns were installed where possible to increase the supply of isobutane for aviation gasoline manufacture. Refrigeration was added at some plants to improve efficiency of extraction.

Industry advisory committees were established in the five PAW districts to advise the petroleum administration for war on various problems affecting the production, transportation and distribution of liquefied petroleum gases.

The Liquefied Petroleum Gas Association has continued to play an active role in the industry. Transportation and technical committees were particularly busy. The Technical and Standards Committee proposed revisions in National Board of Fire Underwriters' Pamphlet 58 to provide rules for warehousing LP-Gas cylinders and to clarify previous regulations.

Considering wartime conditions the liquefied petroleum gas industry has served its domestic customers and war industries well. The year 1944 is expected to be a critical one, with serious problems of manpower, transportation and supply to be solved.

Will Hold NGAA Convention In Dallas, Texas, April 12-14

The annual convention of the Natural Gasoline Association of America will again be held at the Baker hotel, Dallas, Texas, this year on April 12-14, according to William F. Lowe, association secretary.

The Natural Gasoline Supply Men's Association will duplicate in large measure the form of entertainment of previous years. The affair will be held on the evening of Thursday, April 13. G. B. Lane is committee chairman.



WM. F. LOWE

Governor Schoeppel Heads Interstate Compact Commission

Governor Andrew F. Schoeppel, of Kansas, was reelected chairman of the Interstate Oil Compact Commission at the closing session of the compact's winter quarterly meeting on Dec. 10 at Wichita, Kan.

Following the presentation of a number of papers, a survey of oil and gas laws of the various states represented was given by the members of the research and coordinating committee.

Other officers named by the Commission were: J. C. Hunter, Abilene, Texas, first vice chairman; S. E. Peterson, Springfield, Ill., second vice chairman; Charles F. Orr, Oklahoma City, Okla., secretary. Members of the executive committee are: Governor A. F. Schoeppel; J. C. Hunter; Governor Robert S. Kerr, Oklahoma; Hiram Dow, Roswell, N. M., and J. L. McHugh, New Orleans.

Post-War Customers In the Making

ETHEL'S 16, Betty 14. Now that I'm working six days a week making bombs for Berlin, they've taken over in the kitchen. After school the girls do the marketing and cooking, and I must say their home economics classes have taught them to turn out first class meals . . . with all the vitamins and calories we need to keep going. Of course, I'm willing to give our Grand Range a big share of the credit too, and the kids handle it like veterans. We plan to get a shiny new up-to-date model when the war's over. Then, too, it won't be long until Ethel and Betty will be marrying and setting up homes of their own. I'm sure that with the wonderful experience they've had cooking at home, they'll insist on Grand Ranges too.



WHEN PEACE COMES...IT WILL BE GRAND



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Grand Gas Ranges

GRAND HOME APPLIANCE COMPANY
CLEVELAND, OHIO

LP-Gas War Orders At A Glance

- IN THE MORE than two years that this country has been at war, all branches of industry have been subjected to Government orders which limited or controlled business operations.

The liquefied petroleum gas industry is no exception, although it is generally known that fewer and less stringent orders have been issued for our industry than for most others. However, many were brought forth, and to all were amendments or additions or changes to a degree that often brought doubt and confusion to the minds of those who are earnest in their desires to strictly conform to the laws but find them difficult to decipher.

Realizing this, BUTANE-PROPANE News recently asked Paul K. Thompson, Chief of the Liquefied Petroleum Gas Section of the Natural Gas and Natural Gasoline Division, Petroleum Administration for War, to provide a resume, or summary, of all existing orders affecting our industry. Mr. Thompson has been successful in having this done, as the accompanying bulletin shows. It is issued by the PAW from Washington under date of Jan. 15, 1944, is designated as "PAW Priorities Circular No. 17—Miscellaneous Orders Affecting Liquefied Petroleum Gas Equipment," and is signed by Elmer E. Batzell, Special Assistant to the Assistant Deputy Petroleum Administrator. As a summarization of all existing LP-Gas orders to date, it will serve as an accurate and quick reference to men in all branches of our industry.—Editor.

(1) Scope—General Purposes.—

This circular discusses several of the more important orders of the War Production Board and the Office of Price Administration which govern the delivery and supply of liquefied petroleum gas equipment and gas consuming appliances. It also discusses methods of obtaining priorities assistance when such assistance is necessary to acquire liquefied petroleum gas equipment for maintenance or repair and

other purposes. Order L-86, the principal order affecting the installation of liquefied petroleum gas equipment, serves a two-fold purpose. First, it conserves liquefied petroleum gas itself; second, it conserves the use of critical materials by permitting the use of liquefied petroleum gas equipment only by the military and the most essential civilian users.

(2) *Installation of Liquefied Petroleum Gas Equipment.*—Order L-86 is the basic order defining and restricting the installation, delivery and supply of liquefied petroleum gas equipment. As used in this order the term "liquefied petroleum gas equipment" means the entire gas system or any part thereof, including storage tanks, cylinders, piping, tubing, valves, regulators, meters, etc. It does not include the gas consuming appliance nor does it include facilities used for the transportation or refining of liquefied petroleum gas.

Under Order L-86 the installation of liquefied petroleum gas equipment may be made only in accordance with its general provisions or pursuant to a specific exception. Under the general provisions of the order and without applying for a specific exception, an operator or dealer is permitted: (a) to install or reinstall liquefied petroleum gas equipment which was actually in use prior to April 1, 1942, and which was withdrawn from such use on or subsequent to April 1, 1942; (b) to exchange or replace gas containers of equal or less capacity on the consumer's premises when the exchange is made in the normal course of liquefied petroleum gas distribu-



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tion; and (c) to maintain or repair liquefied petroleum gas equipment. In all other instances, a specific exception to the order must be obtained by an application submitted on Form WPB-809. This form should be sent to the Petroleum Administration for War, Washington 25, D. C. Ref: L-86.

Of particular importance is the fact that the order prohibits the connection of additional gas consuming appliances to existing liquefied petroleum gas systems unless a specific exception has been authorized under Order L-86. It also prohibits the use of liquefied petroleum gas equipment for the purpose of burning or consuming liquefied petroleum gas in an internal combustion engine.

Equipment for Inventory

Among other things, the order permits equipment to be delivered to a liquefied petroleum gas operator or dealer for inventory purposes provided the purchase order bears a certification in accordance with paragraph (e) of Order L-86 or the special one-time certification permitted under Priorities Regulation No. 7. However, equipment may not be delivered for a specific installation unless an exception to Order L-86 has been authorized.

In addition to the restrictions of Order L-86, Order M-9-c-4 also applies where installation of new or used copper or copper base alloy, pipe, tubing or fittings, as defined in Order M-9-c-4, is to be made. Under this order no installation of this material may be made (even though no specific exception is necessary under Order L-86) unless both ends of the pipe, tubing or fittings are connected to the liquefied petroleum gas system. For instance, it may be used to connect a cylinder with a regulator or meter, but on the other hand such material may not be used to connect a gas consuming appliance to existing liquefied

petroleum gas equipment, and in no case may such material be attached to or pass through a house or structure unless specific written authorization is received from the WPB.

(3) *Preference Ratings for Liquefied Petroleum Gas Equipment.*—Where it is necessary to obtain a preference rating in order to secure liquefied petroleum gas equipment for inventory purposes (except maintenance or repair equipment) the operator or dealer should make an application for such preference rating by one of the following two procedures:

(a) If the operator or dealer installs liquefied petroleum gas equipment on a loan, rental or lease basis he should file Form WPB-541 (formerly PD-1A) because this equipment remains capital equipment of the operator or dealer. It is important to note that only those ratings issued by the War Production Board directly to the liquefied petroleum gas operators may be used by operators to obtain liquefied petroleum gas equipment for purposes other than resale. Equipment which will remain the property of the operator may not be obtained on ratings issued to or extended by a consumer.

(b) If the liquefied petroleum gas equipment is resold to the consumer then the operator or dealer should apply for a preference rating by filing Form WPB-547 (formerly PD-1X). It is preferable in this latter case not to require the consumer to apply for preference ratings on Form WPB-541. In most cases when the operator wishes to obtain equipment for domestic installations, preference ratings should be requested to obtain equipment which will be placed in the operator's inventory rather than applying separately for preference ratings to obtain equipment for each individual authorized installation.

For the purpose of maintenance or

repair of liquefied petroleum gas equipment used for the storage and dispensing of liquefied petroleum gas by consumer accounts, preference ratings may be obtained pursuant to Order P-98-e. This order assigns a rating of AA-5 and may be used both by consumer accounts and by the liquefied petroleum gas operator or dealer who performs repair work for consumer accounts. Therefore, the ratings by that order may be used for maintenance or repair when the equipment is owned either by the consumer account or the operator. Order P-98-e does not apply to the maintenance or repair of the consuming appliance. Procedure for securing material for the maintenance or repair of consuming appliances is set forth in paragraph (5) of this circular.

Does Not Cover Replacements

Both the consumer account and repairer are authorized to use the preference rating AA-5 under Order P-98-e on delivery orders bearing the proper certification. However, such a preference rating should not be applied to secure material for which no preference rating is necessary, nor may these preference ratings assigned by this order be used to obtain replacement or restoration of any complete storage or dispensing unit such as a tank or a cylinder.

To obtain equipment which is used in connection with the manufacture, distribution or sale of liquefied petroleum gas such as equipment used in refineries, bulk plants or bottling plants, either for maintenance or repair purposes or other purposes, liquefied petroleum gas operators or dealers must use Order P-98-b for necessary priorities assistance. Order P-98-b does not provide priorities assistance to obtain material or equipment to be installed for or used by a consumer account.

Utility companies or operators who normally distribute liquefied petroleum gas through pipe lines or mains may use the preference ratings assigned in Order U-1 for maintenance or repair purposes but where such operators install additional consuming appliances or connect new domestic consumers of liquefied petroleum gas, they must, of course, comply with the provisions of Order L-86.

Way to Obtain Tank Trucks

Neither Order P-98-b nor P-98-e may be used to obtain tank trucks or trailers or repair parts therefor. In the case of a truck or trailer the necessity of acquiring such an item should be established with the nearest District Office of the Office of Defense Transportation. The manufacture of tank bodies is governed by Order L-253, and to secure a tank body the truck operator merely places his order with the tank manufacturer who alone must apply for permission to manufacture the tank on Form WPB-2317. Where priorities assistance is necessary for the repair of trucks and trailers the operator may use the preference ratings assigned under CMP Regulation 5. The operator must also comply with the provisions of L-158 in respect to automotive repairs.

However, P-98-b does provide priorities assistance to obtain material to be actually attached to a tank truck or trailer (other than a tank) which is necessary for containing, dispensing or measuring liquefied petroleum gas.

(4) *Installation of Consuming Appliances.*—New and used commercial cooking equipment as defined in Order L-182 may not be delivered to or accepted or installed by any person unless authorized pursuant to an application for exception to the order on Form WPB-1509 (formerly PD-638-A). When such authorization has been

received a delivery order bearing the proper certification may be placed with the manufacturer.

Order L-79 defines plumbing and heating equipment and provides that no person may deliver or accept delivery of such equipment on or after September 1, 1943 except on a delivery order rated A-10 or higher. This definition includes many appliances which consume liquefied petroleum gas, but the order is not applicable to those appliances which are now handled by the Office of Price Administration local rationing boards. In addition, this order does not affect the use of equipment to be incorporated in a project authorized on Form WPB-2032 (formerly PD-443).

Application for a certificate to purchase cooking or heating stoves is made by the consumer at a local rationing board. In the case of an application for a stove or heater to consume liquefied petroleum gas, the board will not issue a purchase certificate unless: (a) liquefied petroleum gas is installed and has been used with appliances which need to be replaced; or (b) the person applying for the certificate can show that an exception under Order L-86 has been authorized by having in his possession an approved Form WPB-809.

(5) *Maintenance and Repair of Consuming Appliances.*—Consuming appliances such as domestic cooking equipment including cooking stoves, hot plates and gas heating appliances, as well as commercial cooking equipment, are governed by Order P-84 insofar as materials, equipment or parts are needed for the replacement of the equipment worn out, damaged beyond repair or destroyed; or to repair such equipment because of an actual breakdown or for conversion parts. Order P-84 assigns an AA-5 rating to the seller and consumer to obtain material for such purposes, but

this rating may not be used contrary to any ration order to obtain any item rationed by the OPA.

(6) *Delivery of Liquefied Petroleum Gas.*—Order M-201 provides that deliveries of liquefied petroleum gas may be made by any person to any person without regard to preference ratings. It further provides that no preference rating shall be assigned to the purchase, sale or delivery of liquefied petroleum gas. No order prohibits or restricts the delivery of liquefied petroleum gas.

L. R. Boulware Is Operations Vice Chairman of WPB

Executive Vice-Chairman Charles E. Wilson announced Dec. 17 the appointment of Lemuel R. Boulware as operations vice chairman of the War Production Board. Mr. Boulware succeeds Hiland G. Batcheller, who resigned in November.

At the same time, Mr. Wilson announced that Vice Chairman Donald D. Davis has been given charge of all WPB field operations, in addition to his present duties. Regional directors henceforth will report to Mr. Davis, who assumes all of the functions and responsibilities in respect to the field organization that previously were exercised by the operations vice chairman.

Preliminary Work Nearly Finished on New Plants

Petroleum Administrator Ickes announced recently that engineering work and purchase of materials for the 22 100-octane aviation-gasoline plants in the 1944 program are 80% completed.

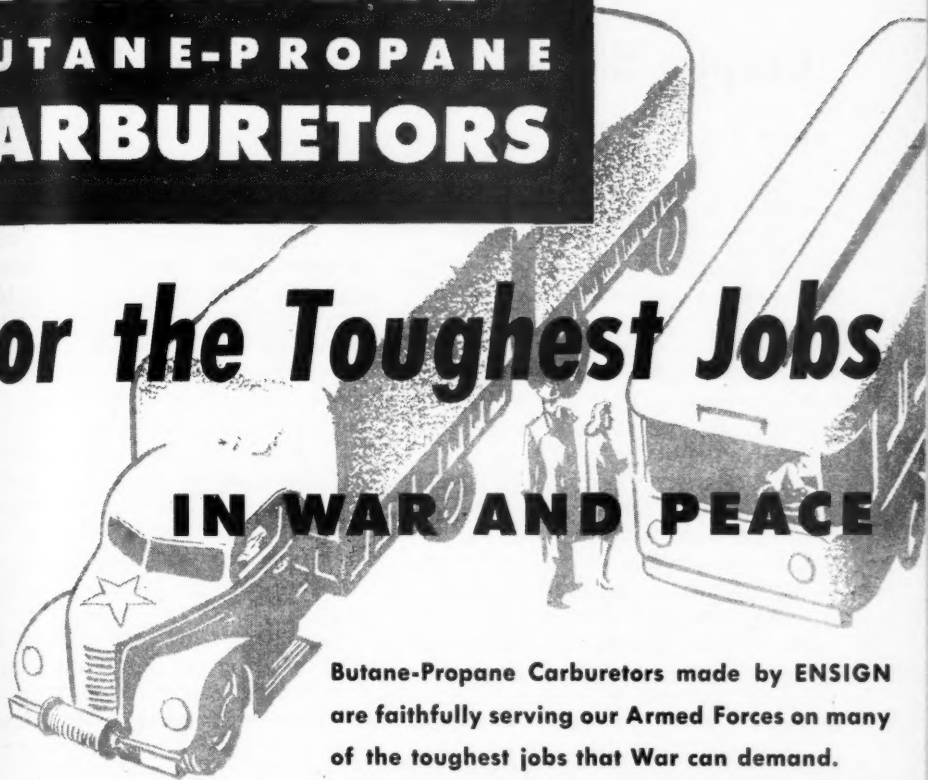
Actual construction work is well under way and all 22 plants are scheduled to be on stream by the end of the year, completing the PAW aviation-gasoline program.

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Before ordering ENSIGN Butane-Propane Carburetion Equipment, or Parts, read W. P. B. General Limitation Order L-86. Copies can be obtained from your nearest W. P. B. office.

THE BOTTLED GAS MANUAL

Chapter 23

Space Heating

Part 2

- Part I of Chapter 23 of the Bottled Gas Manual appeared in the January issue of Butane-Propane News, Page 23. Part 3 will be published in March, with questions and answers for the entire chapter.—Editor.

Some of the Things We Must Know Before Estimating Heating Costs. In the formula and tables we are going to use some terms which are strange to us. While we could use the formula and table according to rule without understanding these terms it might be embarrassing for us if the prospect should ask just what we were doing in our figuring, so we should know what these terms mean.

The first one of these is "Degree Days." A better term would be "Seasonal Heat Deficiency in Degrees Fahrenheit," but this is too bulky a phrase, and as the heating fraternity uses the former we will stick to it. The daily deficiency is taken for each day during the heating season, this being figured from 65°F. The average of all deficiencies for the community during the

heating season is then figured, and this figure is multiplied by the number of days in the heating season. It is obvious that this will vary according to the location of a town, and Table 1 gives the "Degree Days" for representative towns and cities throughout the United States. In using the formula which we shall later analyze you should select some town or city from the table that has weather conditions comparable with the town in which you are located, and use the "Degree Days" for this location.*

The next new term which we shall be using is "Gas Requirement Factor." This is nothing more or less than the number of B.t.u.'s per square foot of steam radiation required for each "Degree Day."

We now come to the "Over-all

- The Bottled Gas Manual series by C. C. Turner, started in the July, 1941, issue of BUTANE-PROPANE News and will continue to be published monthly in chapter form until completed. This series constitutes a valuable text book and field manual that should be invaluable to everyone in the liquefied petroleum gas industry.—Editor.

* As a matter of courtesy to "Butane-Propane News" subscribers, the author will be pleased to supply information as to "Degree Days", "Gas Requirement Factor", and "Over-all Factor" for any community in the United States. Because of the labor involved this service is limited to one request per subscriber, and neither the author nor "Butane-Propane News" assumes any obligation for such information freely given. Simply mail to the author at his residence, 7 Colonial Road, Portland, Maine, your request together with a State map with the town's location accurately spotted thereon, and he will supply you with the desired information at his earliest convenience.

Factor," which is arrived at by multiplying the "Degree Days" by the "Gas Requirement Factor." It has no particular significance in itself, but is supplied in the table in order to simplify the figuring of the formula for you.

Estimating the Seasonal Heating Cost. We are now ready for the formula by which to figure the seasonal heating cost. Putting it in plain English it is as follows:

Heating Cost for Season =

$$\left(\frac{\text{Gas Requirement Factor} \times \text{Actual Sq. Ft. Steam Radiation Required} \times \text{Degree Days}}{1000 \times \text{BTU Value of Gas per Cubic Foot}} \right) \text{Fuel Cost Per Thousand Cu. Ft.}$$

$$M = \left(\frac{(\text{HRD})}{1000V} \right) X$$

Putting this in algebraic form we have:

$$M = \left\{ \frac{(\text{HRD})}{1000V} \right\} X$$

In which:

M = Heating cost in dollars for season.

H = Gas Requirement Factor.

R = Actual square feet of Steam Radiation required.

D = Degree Days.

X = Fuel cost per thousand cubic feet.

V = B.t.u. value of gas per cubic foot.

As the "Over-all Factor" is the "Degree Days" multiplied by the "Gas Requirement Factor," and as these two figures are to be multiplied in the "HRD" portion of the formula given above we can further simplify matters by letting "Y" represent the "Over-all Factor" and take the place of "H" and "D." We can also make a simplification by substituting 2519 as the

value of 1 cu. ft. of propane gas, and then multiplying this amount by 1000 in accordance with the formula. Our formula then becomes:

$$M = \left\{ \frac{(\text{YR})}{2,519,000} \right\} X$$

The value of "X" for propane at various prices will be found in Table 3 of this chapter, but in case that you have a propane price

which is not shown in this table, you can find the value of "X" by the following method:

Method 1. If you are selling propane by the pound:

- A. The B.t.u. value of 1000 cu. ft. of 2519 B.t.u. gas is 2,519,000 B.t.u.
- B. The B.t.u. value of a pound of propane is 21,633 B.t.u. It therefore requires 2,519,000 divided by 21,633, or 116.44 pounds of propane, to provide 1000 cu. ft. of 2519 B.t.u. gas.
- C. Multiply the price per pound at which you sell propane by 116.44 and you will have the price of 1000 cu. ft. of 2519 B.t.u. gas.

Method 2. If you are selling gas by the therm:

- A. A therm is 100,000 B.t.u.
- B. One thousand cu. ft. of 2519 B.t.u. gas is 2,519,000 B.t.u.
- C. It therefore takes 2,519,000 divided by 100,000, or 25.19 therms to equal 1000 cu. ft. of 2519 B.t.u. gas.

TABLE 3. COST OF 100 CU. FT. OF PROPANE GAS AT VARIOUS PRICES PER POUND WEIGHT AND CORRESPONDING PRICES PER THERM.

Basis of computations: 116.44 lbs. of 21,633 B.t.u.-per-pound propane to 1000 cu. ft. of 2519 B.t.u. gas. 25.19 therms per 1000 cu. ft. of 2519 B.t.u. gas.

<i>If Propane Sells for Cents per Pound</i>	<i>The Price of 1000 Cu. Ft. of 2519 B.t.u. Gas in Dollars Would Be</i>	<i>The Corresponding Price in Cents per Therm Would Be</i>	<i>If Propane Sells for Cents per Pound</i>	<i>The Price of 1000 Cu. Ft. of 2519 B.t.u. Gas in Dollars Would Be</i>	<i>The Corresponding Price in Cents per Therm Would Be</i>
1.0	1.16	4.62	5.0	5.82	23.11
1.1	1.28	5.08	5.1	5.93	23.57
1.2	1.39	5.54	5.2	6.05	24.03
1.3	1.51	6.00	5.3	6.17	24.49
1.4	1.63	6.47	5.4	6.28	24.96
1.5	1.74	6.93	5.5	6.40	25.42
1.6	1.86	7.39	5.6	6.52	25.88
1.7	1.97	7.85	5.7	6.64	26.34
1.8	2.09	8.32	5.8	6.75	26.81
1.9	2.21	8.78	5.9	6.87	27.27
2.0	2.44	9.70	6.0	6.98	27.73
2.1	2.44	9.70	6.1	7.10	28.19
2.2	2.56	10.16	6.2	7.21	28.65
2.3	2.67	10.63	6.3	7.33	29.12
2.4	2.79	11.09	6.4	7.45	29.58
2.5	2.91	11.55	6.5	7.56	30.04
2.6	3.02	12.01	6.6	7.68	30.50
2.7	3.14	12.48	6.7	7.80	30.97
2.8	3.26	12.94	6.8	7.91	31.43
2.9	3.37	13.40	6.9	8.03	31.89
3.0	3.49	13.86	7.0	8.15	32.35
3.1	3.60	14.32	7.1	8.26	32.81
3.2	3.72	14.79	7.2	8.38	33.27
3.3	3.84	15.25	7.3	8.50	33.74
3.4	3.95	15.71	7.4	8.61	34.20
3.5	4.07	16.17	7.5	8.73	34.66
3.6	4.19	16.63	7.6	8.85	35.12
3.7	4.30	17.10	7.7	8.96	35.59
3.8	4.42	17.56	7.8	9.08	36.05
3.9	4.54	18.02	7.9	9.19	36.51
4.0	4.65	18.48	8.0	9.31	36.97
4.1	4.77	18.95	8.1	9.43	37.44
4.2	4.89	19.41	8.2	9.55	37.90
4.3	5.00	19.87	8.3	9.66	38.36
4.4	5.12	20.33	8.4	9.78	38.82
4.5	5.23	20.80	8.5	9.89	39.29
4.6	5.35	21.26	8.6	10.01	39.75
4.7	5.47	21.72	8.7	10.13	40.21
4.8	5.58	22.18	8.8	10.24	40.67
4.9	5.70	22.65	8.9	10.36	41.13

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SELL WAR BONDS NOW ★ THE ROPER GAS RANGE LATER
FEBRUARY-1944

TABLE 3. COST OF 100 CU. FT. OF PROPANE GAS AT VARIOUS PRICES PER POUND WEIGHT AND CORRESPONDING PRICES PER THERM.

(Continued from Previous Page)

<i>If Propane Sells for Cents per Pound</i>	<i>The Price of 1000 Cu.Ft. of 2519 B.t.u. Gas in Dollars Would Be</i>	<i>The Corresponding Price in Cents per Therm Would Be</i>	<i>If Propane Sells for Cents per Pound</i>	<i>The Price of 1000 Cu.Ft. of 2519 B.t.u. Gas in Dollars Would Be</i>	<i>The Corresponding Price in Cents per Therm Would Be</i>
9.0	10.47	41.60	11.6	13.50	53.62
9.1	10.59	42.06	11.7	13.62	54.08
9.2	10.71	42.52	11.8	13.73	54.54
9.3	10.82	42.98	11.9	13.85	55.00
9.4	10.94	43.45	12.0	13.97	55.47
9.5	11.06	43.91	12.1	14.08	55.93
9.6	11.17	44.37	12.2	14.20	56.39
9.7	11.29	44.83	12.3	14.32	56.85
9.8	11.41	45.30	12.4	14.43	57.31
9.9	11.52	45.76	12.5	14.55	57.78
10.0	11.64	46.22	12.6	14.67	58.24
10.1	11.76	46.68	12.7	14.78	58.70
10.2	11.87	47.14	12.8	14.90	59.16
10.3	11.99	47.61	12.9	15.02	59.63
10.4	12.10	48.07	13.0	15.13	60.09
10.5	12.22	48.53	13.1	15.25	60.55
10.6	12.34	48.99	13.2	15.37	61.01
10.7	12.45	49.46	13.3	15.48	61.47
10.8	12.57	49.92	13.4	15.60	61.94
10.9	12.69	50.38	13.5	15.71	62.40
11.0	12.80	50.84	13.6	15.83	62.86
11.1	12.92	51.30	13.7	15.95	63.32
11.2	13.04	51.77	13.8	16.06	63.79
11.3	13.15	52.23	13.9	16.18	64.25
11.4	13.27	52.69	14.0	16.30	64.71
11.5	13.39	53.15			

Computations carried out to two decimal points only. Where value of following decimal would be greater than 5 value has been advanced one number.

D. Multiply the price per therm at which you are selling propane by 25.19 and you will have the price of 1000 cu. ft. of 2519 B.t.u. gas.

Method 3. If you are selling gas by the decitherm—

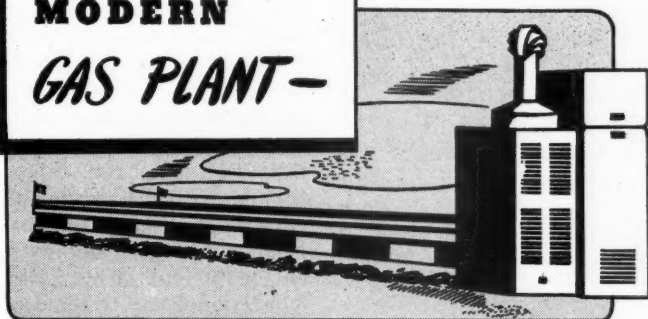
A. A decitherm is 10,000 B.t.u.

B. One thousand cubic feet of 2519 B.t.u. gas is 2,519,000 B.t.u.

C. It therefore takes 2,519,000 divided by 10,000, or 251.9 decitherms to equal 1000 cu. ft. of 2519 B.t.u. gas.

D. Multiply the price per decitherm at which you are selling

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ALGAS-GASAIR INSTALLATIONS—combining the skill of ALGAS engineers with the performance of GASAIR units—solve your fuel problems.

IF YOU USE NATURAL GAS—ALGAS installation can be set-up to increase pressure during peak hours, or to increase heat unit value, by automatically cutting in with a butane-propane and air mixture. An ALGAS installation will carry the entire load during any emergency, without change in equipment.

IF YOU USE MANUFACTURED GAS—an ALGAS installation offers all of the above-mentioned benefits. Also it can be used in full-time operation, in most cases supplying fuel at less cost than water-gas, coke-oven gas, etc.

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propane by 251.9 and you will have the price of 1000 cu. ft. of 2519 B.t.u. gas.

How the Seasonal Heating Cost Formula Works. Let us return to our Bismarck, North Dakota, example. First let us figure it on the basis of complete absence of insulating provisions, and requiring 57.21 sq. ft. of steam radiation. Let us assume a propane cost of 5 cents per lb., or \$5.82 per 1000 cu. ft.

By consulting Table 1 we find that the value of "Y" is 662,844, so substituting values in the formula we have:

$$M = \left\{ \frac{(662844)(57.91)}{2519000} \right\} 5.82$$

$$M = \frac{(37921305.24)}{2519000} = 5.82$$

M = \$87.61 seasonal heating cost.

Too high a heating bill? Perhaps by now you realize why I have placed so much emphasis on this matter of insulation and including it in the cost of installation. Let's turn back to the paragraph on "The Effect of Insulation on Heating Plant Size," and apply the conservative percentages listed therein which apply to reduction of the amount of steam radiation when certain insulating precautions are taken. The results are startling, and I think that we may best analyze them by putting our figures in the tabular form shown in accompanying Table 4.

TABLE 4. REDUCTION OF SQUARE FEET OF STEAM RADIATION REQUIREMENTS, AND OF HEATING COSTS, WITH APPLICATION OF VARIOUS METHODS AND TYPES OF INSULATION.

<i>Place Where Insulating Precautions Are Taken</i>	<i>Method of Preventing Heat Loss</i>	<i>Percent That Number of Sq. Ft. of Steam Radiation Can Be Cut Down</i>	<i>Resulting Fuel Bill on Our Bismarck, N. Dakota, Heating Problem</i>
Walls and roof	4 in. of mineral wool	25	\$65.71
Window glass and outside doors	Double windows and doors	10	\$78.85
Window glass and outside doors	Weather stripping in addition to double windows and doors	5*	\$74.47
Floors	4 in. of mineral wool	3	\$84.98
All places mentioned above	All methods mentioned above	43	\$49.94

* Actually figured at 15% because 10% should also be deducted for the double windows and doors.

Comparative Heating Costs.

There will be those who will immediately say, "I can do that same heating job cheaper with some other fuel." Sure you can, if all that you are considering is the actual fuel cost. You can also ride a bicycle from one place to another much cheaper than you can drive an automobile over the same road if the cost of fuel and tires is all that you consider, but the chances are that if you added in the items of food and lodging and value of time, the bicycle method of transportation would be the more expensive of the two. The luxury of yesterday has become the

necessity of today, for the tempo of our modern existence has changed relative values. The desire for gas equipment, cooking, cooling, heating, or otherwise, is that of the human heart yearning for a respite from the rigors of life—a bit of comfort in our journey through life.

Let's compare (Table 5) some of these competitive fuels and see just how they "stack up" with propane. Perhaps when we compare all items of cost, propane may be the cheapest fuel to use!

Types of Gas Space Heaters. The types of gas space heaters which are available for your customers

TABLE 5. COMPARISON OF COSTS, PROPANE IN SPACE HEATING VERSUS OTHER FUELS.

ITEM OF COST	COAL	WOOD	OIL	ELECTRICITY
<i>Flue and Chimney</i>	<i>More</i>	<i>More</i>	<i>More</i>	<i>Less*</i>
Purchase price of equipment	About same	About same	More	More
Replacement and repairs	More	More	More	More
Depreciation of appliance	More	More	More	More
Time and labor required to attend	More	More	More	About same
Cleaning required	More	More	More	About same
Damage to furnishings and finish	More	More	More	About same
Fuel cost	May be a little less	May be a little less	About same	Usually more
Unfavorable Items	6	6	7	4
Equal Items	1	1	1	3
Favorable Items	1	1	0	1

* This is providing that a vented type propane heater is used in comparison to an unvented type electric heater. If an unvented propane heater is used the cost would be the same.

may be generally classified as follows:

1. A. Radiant heaters.
B. Radiant and circulating heaters combined in one.
2. Circulating heaters.
A. Plain circulating heaters.
B. Circulating heaters with built-in blowers.
- C. Floor furnaces.
- D. Air conditioning furnaces.
3. Gas-fired steam radiators.
4. Hot water radiation systems.

Radiant Heaters. Radiant heaters enjoy the greatest unit volume of sales because of their low first cost and portability. They are made in both the vented and unvented type, and supply heat by radiation and convection. A typical heater of this type is shown in Fig. 1.

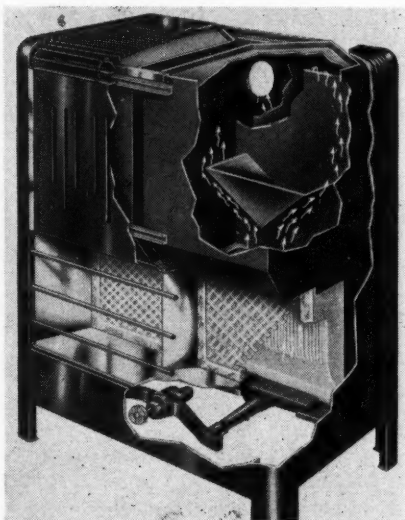


Fig. 1. This is a radiant fire circulator, combining the virtues of a radiant heater with those of a circulating heater. (Courtesy of General Gas Light Co.)

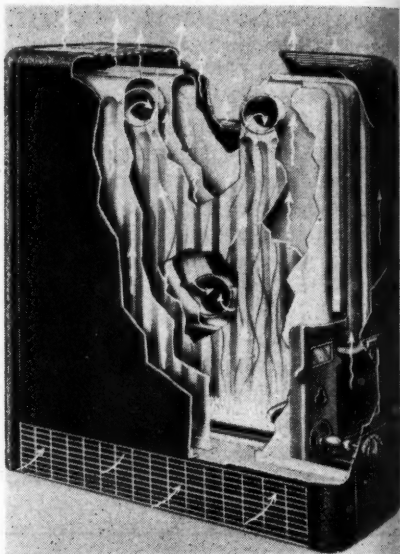


Fig. 2. A plain, circulating heater which may be vented or unvented. (Courtesy of Estate Stove Co.)

Radiant heaters are usually installed near a central wall or in a fireplace. The best results will be obtained if the radiant rays are directed towards the point at which cold is most likely to enter the room or in the general direction of the greatest occupancy. They should not be directed towards the glass in a window because in this manner much of the radiant heat will be transmitted through the glass, but if the principal point at which heat escapes is through and around the windows the radiant rays should be directed towards the space below them if possible. Radiant heaters will be found to be very satisfactory for occasional or intermittent heating, and they may be efficiently controlled with a

DALLAS TANK & WELDING COMPANY, INC.

BUTANE DIGEST

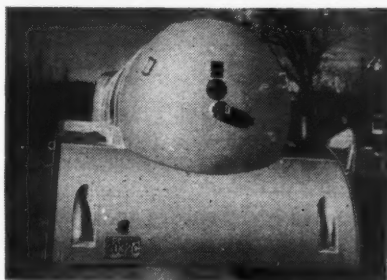
By W. W. BANKS



WE'RE BACKING THE ATTACK!

We know our job here at the Dallas Tank & Welding Company and we're doing it! Our four-acre plant of 40,000 square feet of working space and equipment and 150 employees are devoted to wartime production exclusively.

After victory is won all of our modern facilities, combined with "know how" knowledge, will be diverted to the production of peacetime fabrications again. In the meantime let's all . . .



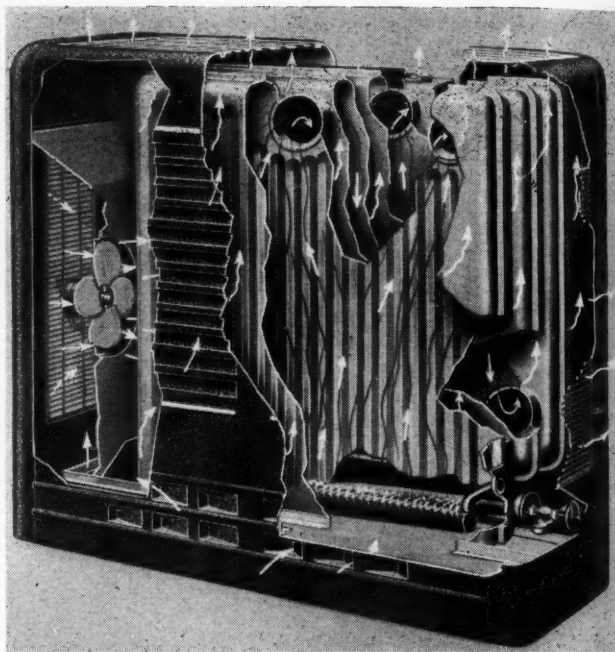
Above is a de luxe mounted truck tank of 1200 net gallons capacity.

Buy More Bonds!

DALLAS AND TANK
WELDING COMPANY, INC.
201-5 W. COMMERCE ST. DALLAS, TEXAS

FEBRUARY-1944

Fig. 2-A.—A fan-forced air circulating heater showing blower. (Courtesy of Estate Stove Co.)



throttling type thermostat which has a by-pass adjustment for low flame.

Radiant and Circulating Heaters Combined in One. These differ from simple radiant heaters only in the matter of burned gases being conducted through a flue which is surrounded by an air chamber. By doing this a certain amount of efficiency is gained in supplying a greater portion of the desired heat by increased convection or circulation. The same general comments which apply to simple radiant heaters apply to these heaters as well.

Plain Circulating Heaters. Plain circulating heaters are usually entirely conventional in their design. The burner is placed within an

inner metal shell which is surrounded by a concentric outer shell about 4 in. distant from it. The resulting flue is open at both the bottom and the top, and the top of the inner shell is usually vented through a flue collar. This collar, in the case of a propane gas burning circulating heater may or may not be connected to a chimney by common stove pipe. When connected to a chimney these heaters make excellent 24-hour units, but where they are used for continuous heat they should, for the sake of economy, only be installed with thermostatic control. Typical circulating heaters are shown in Figs. 2 and 2-A. (Part 3, Chapter 23, will appear in March.)

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THE TRADE

R. S. Reed, Jr., for the past 12 years advertising director of Pittsburgh Equitable Meter Co. of Pittsburgh, and Merco Nordstrom Valve Co. of Pittsburgh and Oakland, has been appointed manager of the Pittsburgh office of the McCarthy Co., industrial advertising counselors. The Pittsburgh office was established on Jan. 3 in Suite 2205, Koppers Bldg.

The Geo. D. Roper Corp., Rockford, Ill., has started production of war model gas ranges. After a year and a half of no range production, this new gas range is being built in limited quantities commensurate with the quarterly release of materials by the War Production Board. The ranges will be sold under provisions of the stove rationing program

Directors and officers of the Geo. D. Roper Corp. and its subsidiaries were selected for the ensuing year at the annual stockholders' meeting and

subsequent directors' meeting held at the general offices in Rockford, Ill., Dec. 21.

Floyd K. Lawson was elected a director, while Stanley H. Hobson, Hugo L. Olson and Shelby L. Large, all of Rockford, and J. Sanford Otis, of Chicago, were re-elected to the directorate.

At the directors' meeting the following officers were appointed: Stanley H. Hobson, president; Floyd K. Lawson, executive vice president and treasurer; John P. Curtin, vice president and secretary; E. Carl Sorby, William J. Foster, and Otto Olson, vice presidents; Charles Oehler, assistant treasurer; Thomas P. Burns and J. Arthur Dion, assistant secretaries.

William Roy Ford, educator and fire protection engineer, has resigned from the U. S. Office of Civilian Defense, where he has been serving as assistant chief of the fire defense education unit, to become assistant to L. W. Hutchins, director of Safety Research Institute, New York City.

Previously, he was administrative

▲

The first Roper range in 18 months is viewed by (left to right) Otto Olson, works manager; Vollie Kimery, vice president; E. Carl Sorby, vice president; Floyd K. Lawson, executive vice president; George W. Baldwin, sales manager.

▼



officer and educational director of the Dallas, Texas, fire prevention council, and fire analyst for the city of Dallas.

The Florence Stove Co. of Gardner, Mass., manufacturers of stoves, ranges and heaters, has appointed Ruthrauff & Ryan, Inc., New York City, to handle its advertising.

The Caloric Gas Stove Works will start production immediately of a new model approved-type gas range, it is announced by Julius Klein, executive of the firm.

Delivery to dealers was to start in January, according to Mr. Klein. Unit production of the new range will equal approximately 40% of the com-

pany's unit gas range production in 1941.

Both plants of the company have been running at capacity, producing porcelain enamel heating stoves for the armed services and other governmental agencies. Huge quantities of these stoves, ear-marked for the U. S. Army, have been shipped abroad.

Frank J. Nugent has been appointed general appliance sales manager for Rheem Manufacturing Co. His headquarters will be at 570 Lexington Ave., New York City.

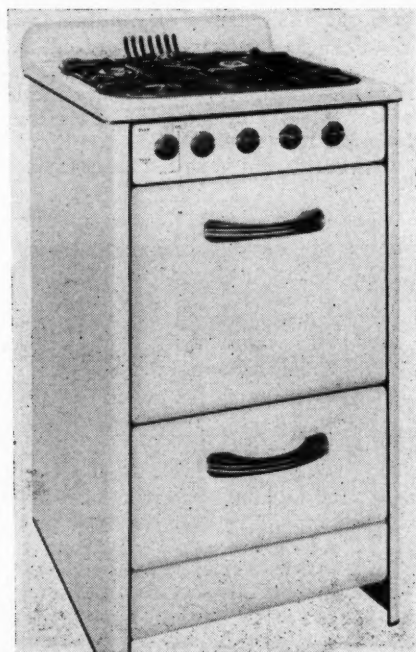
For the past six years Mr. Nugent has been sales manager for the Rheem Chicago and Houston, Texas, offices.

William E. Curran has been appointed vice president in charge of manufacturing of the Rheem Manufacturing Co., and general manager of the company's eastern division. The announcement comes from R. S. Rheem, president of the company. Mr. Curran had been manager of Rheem's Richmond, Calif., plant.

Mr. Curran will make his headquarters at the company's New York office, 570 Lexington Ave. He will be in direct charge of manufacturing operations in all of the company's 14 plants in the United States.

Walter H. Parker, vice president in charge of manufacturing, Pittsburgh Equitable Meter Co., died suddenly on Dec. 28, in his home at Pittsburgh, Pa., from a heart attack following the contraction of pneumonia. He was 51 years old and was a graduate of North Carolina State College of Agriculture and Engineering at Raleigh, N. C.

During the first World War Mr. Parker served as a captain in the air corps and was honored with a



New model approved-type Caloric range.

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UNCLE SAM has "unfinished business" all over the world. But he's getting along with it, fast! We, of PAYNEHEAT, are concentrating on our war job. But when the shooting stops, our dealers can resume *their* unfinished business — with the aid of time-tested, years-ahead

Payne ZONE - CONDITIONING

Post-war successor to old-fashioned central heating! Carefree, fuel-saving gas heating and fresh air circulation . . . under finger-tip control *by zones or individual rooms.* ★ But first, let's all help finish the big job. *Back the boys with Bonds!*



PAYNEHEAT



NEARLY 30 YEARS OF LEADERSHIP

Payne FURNACE & SUPPLY CO., INC., BEVERLY HILLS, CALIFORNIA

FEBRUARY-1944

citation for the development of a synchronizing principle for firing bullets between the blades of airplane propellers. During the present war he contributed many valuable innovations in the development and manufacture of medium caliber armor-piercing shot.

The Tappan Stove Co., Mansfield, Ohio, has had a star added to the Army-Navy "E" award made to it last June. Symbolic of six months of continued service in the war of production, the new star was presented to P. R. Tappan, president of the firm, in the presence of all employees.

At present the Tappan Stove Co. is manufacturing the Tappan "sky kitchen" for army and navy bombers, droppable gasoline tanks, and many other products for the armed forces.

E. P. "Red" Millikan, since 1929 manager of the Pacific Coast sales division of American Stove Co., was

transferred to Chicago on Jan. 1 as manager of the company's northern sales division.

R. W. "Doc" Campbell steps into Mr. Millikan's former position as manager of the Pacific Coast sales division.

T. T. Arden has been elected to the presidency of Grayson Heat Control, Ltd., of Lynwood, Calif. Formerly he was vice president and general manager of the company.

Harold J. Rust, formerly director of sales of Acme Industries, Inc., Jackson, Mich., has been appointed sales manager of Handley Brown Heater Co., of Jackson, according to Harold E. Handley, Handley Brown's general manager.

In 1927 Mr. Rust started with Consumers Power Co., of Michigan, in the Saginaw division as crew manager of water heater salesmen. Serving 16

HEAT CONTROL

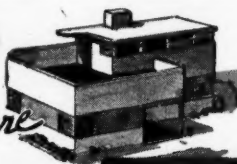
in a package for

Homes of the Future

B-60

PACKAGE SETS

Everything you need—wrapped up in a package—for quiet, safe, automatic control of central and floor furnaces, gas-fired boilers, radiators, gas ranges and water heaters. Handling manufactured, mixed, natural or butane gas, the B-60 gas valve with tamper-proof cover and integral pilot valve assembly; an ivory-and-chrome finished Trim-therm thermostat; 30 feet of wire;



Write for
Catalog 52



and a thermocouple pilot generator providing all current needed for efficient valve operation. Regular, thermometer and timer-thermostats available are with or without night cut-off.

GENERAL CONTROLS

801 ALLEN AVENUE • GLENDALE 1, CALIFORNIA

BRANCHES: Boston, New York, Philadelphia, Cleveland, Detroit,

Denver, Chicago, Dallas and San Francisco

CLOW *Gasteam* RADIATORS

Combine

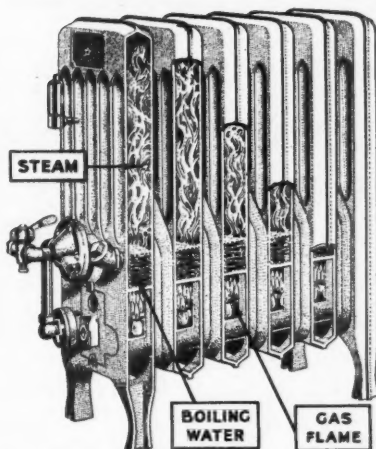
THE SUPERIORITY OF STEAM
RADIATOR HEATING WITH
THE FLEXIBILITY OF ROOM
HEATERS.

1878



1944

*The Radiator That Makes Its
Own Steam Heat With Gas*



ORDERS WE CAN FILL NOW

1. Orders accompanied by Ration Certificates: Local ration boards have the authority to issue ration certificates for Clow Gasteam Radiators (classed as gas-heating stoves in Ration Order 9-A) that are to replace worn-out or otherwise unusable gas heaters. Under certain conditions the board can also authorize installations in existing buildings. See your local ration board.

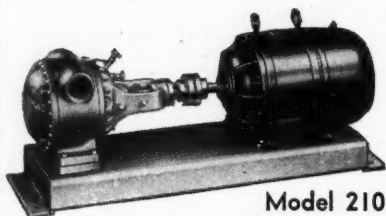
2. Orders carrying Priority Ratings issued in connection with approved new construction: Clow Gasteam Radiators can be sold if a priority rating has been issued for them as a part of new construction authorized under WPB Limitation Order L-41.

WRITE FOR FREE DESCRIPTIVE FOLDER

JAMES B. CLOW & SONS

201-299 N. TALMAN AVENUE, CHICAGO, ILLINOIS

SMITH BUTANE-PROPANE PUMPS



Model 210

STANDARD EQUIPMENT

With Leading LPG Engineers

MODEL 210 (Above) • Capacity 50 GPM at 1750 RPM for direct connecting to electric motor.

MODEL 211 • Capacity 50 GPM at 500 RPM for tank truck direct connected to power take-off.

MODEL 300 • Capacity 100 GPM at 1750 RPM for direct connecting to electric motor.

MODEL 301 • Capacity 100 GPM at 500 RPM for large transport service direct connected to power take-off drive.

**BALANCED GEAR CONSTRUCTION
RELIEVES BEARING LOADS**

**FLUID SEALED PACKING BOX
ELIMINATES HAZARDOUS LEAKS**

250 LBS. WORKING PRESSURE

Prompt Delivery on
Complete Assemblies

Write for literature and prices.

SMITH Precision Products COMPANY

1135 MISSION ST. SOUTH PASADENA, CALIF.

years in the appliance field with utility operations, Mr. Rust has directed sales of all types of appliances, including service and advertising.

Walter H. Hoagland joined Fisher Governor Co.'s sales engineering staff Jan. 1. He will devote practically all of his time to the development and sale of Fisher equipment for the LP-Gas industry. Fisher headquarters are in Marshalltown, Iowa.



W. H. HOAGLAND

Mr. Hoagland has been connected with the gas business — manufactured, natural, and liquefied petroleum — for the past 20 years and comes to Fisher from Shell Oil Co.'s technical products department where he was in charge of design, engineering and sales of tank car industrial LP-Gas sales. He is the present chairman of the Technical and Standards committee of the Liquefied Petroleum Gas Association.

Fred A. Kaiser has been appointed assistant to the president of Detroit-Michigan Stove Co., it has been announced by John A. Fry, president. Prior to his elevation to the new position he was sales manager of the company.

Geo. S. Jones, Jr., vice president in charge of sales for Servel, Inc., has announced the enlargement of the distributing territory of the Skelgas Division of the Skelly Oil Co. for the Servel gas refrigerator.

Under the new franchise Skelgas



I'm visiting
YOUR customers!

★ Stepping out in a new series of national advertisements the Bryant pup again in 1944 is keeping your prospects interested in gas heating, selling them on the advantages of clean, convenient, trouble-free, economical Bryant gas heating.

Predictions are that there will be more than one million new housing units built in the first year of peace. Every one represents a possible installation for gas heating. It is certain, too, that many other homes, forced by emergency restrictions to install less convenient heating equipment, will be converted to gas heating when this modern equipment becomes available to them.

Prepare for getting *your* share of this heating business. Now is the time to make plans. And, you will find it worthwhile to plan on selling Bryant equipment. It's nationally-known, nationally advertised—is backed by a great nationwide sales and engineering organization which helps you make more and more profitable sales. The Bryant Heater Company, 17825 St. Clair Ave., Cleveland 10, Ohio . . . *One of the Dresser Industries.*

bryant
GAS
HEATING



Let the pup be furnace man

will distribute the Servel gas refrigerator for installation on its own LP-Gas systems in Michigan, Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska, Iowa, Illinois, Indiana, Missouri, Kansas, Ohio and Colorado. In addition Skelgas will have 13 counties in Wyoming.

Mr. Jones has also announced appointments of new merchandising distributors for Servel in the LP-Gas field as follows:

Illinois: Illinois Bottle Gas Co., Chicago.

Iowa: American Petroleum Co., Davenport; Thermogas Co., Des Moines; Munn E. Cassady, Des Moines; Bottled Gas Corp., Bettendorf; Rapid Gas Corp., Cedar Rapids; Harms Oil Co., Allison; Iowa Automatic Gas Co., Early; Bupane Gas Co., Cedar Rapids.

Michigan: Petgas Co., Petoskey; Cyr Bottled Gas Co., Marquette.

Minnesota: Home Gas Co., Minneapolis; Minngas Co., Tracy; Northwest Hydro Gas Co., Minneapolis.

Nebraska: Butane Gas Corp., Omaha; Omaha Blaugas Co., Omaha.

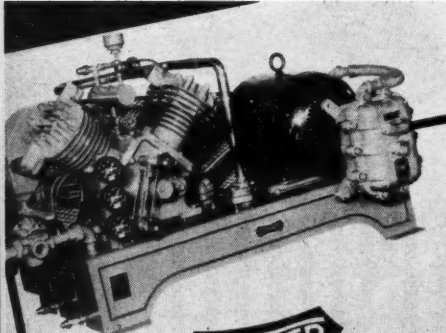
North Dakota: Fargo Bottled Gas Co., Fargo.

Wisconsin: Lloyd L. Felker, Marshfield; Onigas Co., Rhinelander; Badger Gas Products, Platteville; Wisconsin Bottle Gas Co., Medford.

As soon as wartime manufacturing restrictions have been lifted the new appointees will have the full Servel domestic refrigeration line for distribution to their own customers.

The Robertshaw Thermostat Co., Youngwood, Pa., has started a new radio program featuring the correct use of oven heat controls manufactured by the company.

This new Robertshaw feature has as its purpose instruction on use of the oven control to save food and fuel during war time—the creation of an increased post-war market for modern gas ranges equipped with oven controls.



BRUNNER

LP GAS UNIT

COMPRESSOR ASSEMBLY THAT WILL PUMP VOLATILE LIQUIDS AND SALVAGE THEIR RESIDUAL VAPORS

THIS NEW BOOKLET
tells how to
SALVAGE IT!

BRUNNER MANUFACTURING COMPANY
UTICA, NEW YORK, U.S.A.

Save from 500 to 1000 lbs. of LP Gas Vapor from each Tank Car

Conservation of petroleum products is a war necessity. The vapor left in the tank after liquid petroleum has been transferred from a tank car or truck equals from 500 to 1000 lbs. of LP Gas! This booklet... probably the most comprehensive ever prepared... tells how this vapor can be salvaged with the Brunner LP Gas Unit. This unit for gas transfer and recovery is outstanding in speed, efficiency and low cost. The savings in gas alone will pay for the unit after a few unloadings. In addition, the time required for unloading is greatly reduced. Brunner Manufacturing Company, Utica, N. Y., U. S. A.

Mail This Coupon TODAY!

Brunner Manufacturing Company, Utica, N. Y., U. S. A.

Send me the booklet describing the Brunner LP Gas Unit and containing diagrams, tables and valuable information on the handling of liquid petroleum gas.

Name _____

Address _____

City and State _____

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**WORTH
WAITING AND
SAVING FOR..**

A New, Revolutionary, Liquefied Gas System

War stopped production of liquefied gas systems. But it did not stop our "brain department". Instead of just talking about postwar, Butler Engineers have been doing something very realistic about it.

We cannot tell you the details yet. But, we can say that the Butler-Built Liquefied Gas Systems you will be selling postwar are really revolutionary. They are so different and so far ahead of anything that came before them that every Butler dealer will be in a position to make up for business lost during the war in a relatively short time after the war's end.

Full details are not yet available. However, they will be before conditions of war permit the mass production we have planned.

May we therefore suggest that all dealers interested in getting into this most promising line of business, drop us a line saying—"Count me in on the new Butler-Built Liquefied Petroleum Gas set-up and send full proposition when it's ready".



BUTLER MANUFACTURING COMPANY
1219 EASTERN AVE., KANSAS CITY, MO.

BUTLER  BUILT

LIQUEFIED PETROLEUM GAS

Home Systems, Truck and Trailer Transport Tanks and Bulk Storage Tanks

*For Safety
and Economy*

ETHYL MERCAPTAN

—Purified—

**The ACCEPTED
standard
odorant
for liquefied
petroleum
gases.**

**MALLINCKRODT
CHEMICAL WORKS**

ST. LOUIS

NEW YORK

For

"AFCO" Tanks

Write the

**ARKANSAS FOUNDRY CO.
IRON & STEEL**

*Manufacturers of ASME U-69
Underground Storage Tanks
for Butane*

Arkansas Foundry Company

1501 EAST SIXTH STREET
LITTLE ROCK, ARKANSAS

Phones

LD 66

Local 8231

Butane Central Plant Sold at The Dalles, Ore.

By a transaction completed in December Grover E. Keller has sold all of his stock of The Dalles Natural Gas Co., The Dalles, Ore. to W. J. Swick and Mel Davidson.

Mr. Swick, one of the new owners, has been employed by the company as maintenance man, as well as operating his own butane gas service to farms and other individuals. Mr. Davidson operates a tire recapping service in The Dalles.

The new owners plan extensive modernization at the plant with a view to giving gas consumers better service. They also state the business will be vastly expanded throughout the city.

The plant was built late in 1931 by the Standard Oil Co. and service was started in February, 1932. It was one of many such plants built by the company to create an outlet for butane gas.

When the system was installed in The Dalles, approximately 40 miles of gas mains were laid in the streets and alleys of the city at a cost of nearly \$100,000, as stated by the Standard Oil officials. After operating the plant for a short time, it was offered for sale, at which time Grover E. Keller purchased it, in October, 1934.

Rules for Sale of Idle Materials Are Revised

Priorities Regulation No. 13, governing special sales of idle and excess materials, has been revised, in order that all regulations issued prior to Dec. 22, shall have no effect on redistribution of such materials.

One of the exceptions to this general rule is Order P-98-c, governing special sales in the petroleum industry.

how's YOUR quota?

**YOUR
4th
WAR LOAN
QUOTA**



IF you haven't already got a smooth running, hard hitting War Loan Organization at work in your plant, there's not a minute to lose.

To meet your plant's quota means that you'll have to hold your present Pay-Roll Deduction Plan payments at their all-time high—plus such additional amount as your local War Finance Committee has assigned to you. In most cases this will mean the sale of *at least* one \$100 bond per worker. It means having a fast-cracking sales organization, geared to reach personally and effectively every individual

in your plant. And it means hammering right along until you've reached a 100% record in those *extra* \$100—or better—bonds!

So common are the cases of two, three, or even more, wage-earners in a single family, that you'll do well to forget having ever heard of '100%' as a reasonable investment. Why, for thousands of these 'multiple-income' families 10% or 15% represents but a paltry fraction of an investment which should be running at 25%, 50%, or more!

**LET'S ALL
BACK THE ATTACK**

*This Space Contributed to
Victory by*
BUTANE-PROPANE NEWS

*This is an official U. S. Treasury advertisement—prepared under auspices of
Treasury Department and War Advertising Council*

*A Name
That Stands
for Quality*

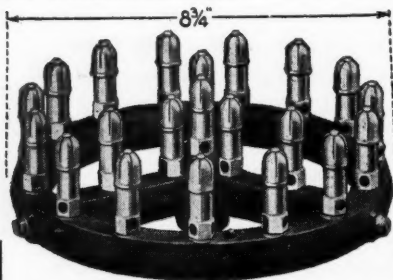
McNAMAR

Tanks for
most all L.P.G.
requirements

McNAMAR
Boiler and Tank Co.

Tulsa, Okla.

Salem, Ill.



No. C 210 Barber Burner

BARBER APPLIANCE BURNERS

We are mainly on war production, but wherever permitted, we are supplying our regular products. Barber Units, in many standard or special shapes and sizes, are always correctly designed to fit the individual appliance, and give complete combustion on Butane-Propane or any other gas. Be ready for big post-war business—submit your special burner problems NOW to Barber engineers. Complete catalog on request.

THE BARBER GAS BURNER CO.

3704 Superior Ave.

Cleveland, Ohio

Now Easier To Obtain Rationed Heating Stoves

Eligibility requirements for rationed heating stoves have been widened and several other modifications of the stove rationing program have been announced by OPA. The following actions were taken:

(1) A consumer who has a heating or cooking stove that cannot be used satisfactorily, is now eligible for a stove rationing certificate.

(2) Ration certificates may now be issued for stoves to heat premises where essential community activities, such as volunteer Red Cross work, are carried on.

(3) New cooking stove certificates will be issued only if the stove is to be used for essential living or working or for an activity contributing to the war effort.

(4) Certificates may also be issued for oil heating and cooking stoves in the emergency oil shortage area.

(5) House trailer manufacturers are now required to obtain stoves for installation in their trailers on WPB priority order rather than stove purchase certificates.

(6) A ration certificate may be issued to a landlord who wishes to buy a stove for the use of an eligible tenant.

(7) The issuance of purchase certificates to persons holding WPB orders and priorities (for example, builders of housing projects) for getting stoves is prohibited.

(8) A consumer may now make an offer to buy a stove without surrendering a ration certificate at the time of the offer.

(9) Equipment such as fireplaces, fireplace grates and andirons are specifically excluded from the definition of stoves and a person having any of this equipment is not presumed to have a stove.

Manufacturing Group Elects John E. Russell President

At its eleventh annual meeting, in Washington, D. C., in December, the Institute of Cooking and Heating Appliance Manufacturers elected for their president John E. Russell, Majestic Manufacturing Co.

Other officers elected were: Henry H. Morse, vice president, Florence Stove Co.; Foskett Brown, president of Gray & Dudley Company, and Jennings B. Gordon, president of the Southern Co-Operative Foundry Co.

PUTTING THE "OK" ON YOUR REZNOR UNIT HEATER . . .

Each Reznor Unit Heater must stand inspection before shipment to you. This experienced workman, a Reznor employee for 24 years, checks over each part of the product.

Here he has connected the heater to a gas line and is applying a flame to make certain there are no leaks. In turn he will test the wiring, the valves, the controls, the pressure regulator, and all of the other parts.

When you buy a Reznor Unit Heater, you purchase a quality product that will deliver an even flow of heat where you want it, when you want it.

REZNOR MANUFACTURING CO.
304 JAMES ST. MERCER, PENNA.



REZNOR



"GAS HEATERS EXCLUSIVELY SINCE 1888"

4th WAR LOAN Drive



We're participating

Wholeheartedly . . .

How about YOU?

4th WAR LOAN DRIVE
Jan. 18 to Feb. 15, 1944

ANCHOR
PETROLEUM COMPANY
TULSA, OKLAHOMA
BUTANE-PROPANE

PRODUCTION AND DISTRIBUTION OF LP-GASES * IN UNITED STATES

(Thousands of Gallons)

	Nov. 1943	Oct. 1943	Nov. 1942	Jan. 1943	Nov. 1942
Production:					
Isobutane at natural gasoline and cycle plants	17,346	16,338	10,038	151,998	92,736
Other LP-Gases at natural gasoline and cycle plants	72,240	71,862	58,002	751,044	602,532
Total	89,586	88,200	68,040	903,042	695,268
Demand:					
LP-Gases and benzol used at refineries.....	39,858	41,244	30,030	410,214	359,562
LP-Gases for fuel.....	39,144	36,792	28,854	366,156	267,246
Total	79,002	78,036	58,884	776,370	626,808
Stocks (End of Month):					
LP-Gases	42,336	45,066	24,066	42,336	24,066

* Liquefied refinery gases not included. Extracted from November 1943 natural gasoline report of U. S. Bureau of Mines.

BUTANE-PROPANE EQUIPMENT PUMPS—METERS—HOSE VALVES—FITTINGS REGULATORS

Complete Dispensing Systems



FACTORY SALES AND SERVICE
FOR
ROADMASTER BUTANE CARBURETION

Roadmaster Sales Corp.

of Texas

317 So. Pearl Street

Dallas, Texas

Engine Fuels and Design Gets Illinois Tech Building

The Illinois Institute of Technology has broken ground for the second permanent unit of its \$3,100,000 campus development program.

Being built for the Armour Research Foundation, the building will house the automotive research laboratory.

The laboratory serves not only the military forces, but also all the major petroleum producers and chemical manufacturers. Every major oil company in the United States and Canada has been served by the laboratory.

The Armour Research Foundation has been doing work in automotive research for four years under the direction of Norman C. Penfold. The work includes development and studies in fuels and fundamental engine design.

Superior FLARE FITTINGS

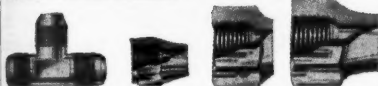
Especially For

L. P. G. INSTALLATIONS

SAE (Flare) Unions,
Couplings, Adapt-
ers, Elbows, Tees,
Crosses and Nuts

Listed as Standard by

**UNDERWRITERS
LABORATORIES,
INC.**

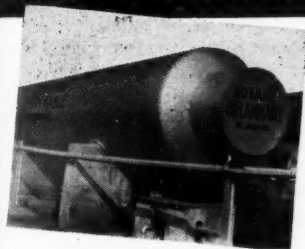


WRITE FOR BULLETIN

SUPERIOR VALVE & FITTINGS CO.

1509 WEST LIBERTY AVENUE
PITTSBURGH • PENNSYLVANIA

**AMERICAN BUTANE AND
PROPANE TANKS ASSURE
MAXIMUM SAFETY AND
DEPENDABLE SERVICE.**



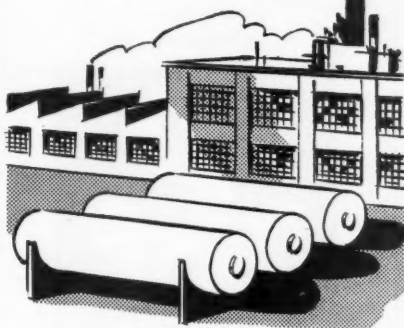
Design, materials, construction, workman-
ship and price of American Pressure Tanks
are the result of over thirty years of
specialized manufacturing experience. Each
Tank is built to give longer, better service.
Call or write for information today.

AMERICAN PIPE & STEEL CORPORATION

Manufacturers and Distributors
Alhambra California

'BUDDIES'

**SINCLAIR'S LP-GASES—
PLUS NATURAL GAS**



War makes strange bedfellows! It's
one for all and all for America until
the Axis is defeated. War production
must go on 24 hours a day to get the
job done. That's why many war indus-
tries and gas companies are now
using the easily adaptable, easily
controlled and immediately available
SINCLAIR Butane and Propane gases
as a supplement to natural gas.
Liquefied Petroleum gases are inval-
uable for ENRICHMENT, PEAK LOAD
AND STANDBY uses.

If, for any reason, natural gas fails,
Sinclair's Liquefied Petroleum gases
can carry the load unaided. If natu-
ral gas B.t.u. is low, LP-gases can sup-
ply exactly the enrichment needed.

In spite of the fact that most of
Sinclair's production is going directly
into war production uses, regular
domestic and industrial users are still
being supplied.

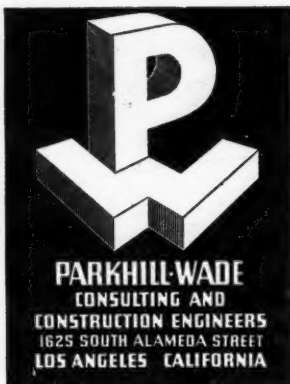
*Protect your fuel requirements
by contracting with*

**SINCLAIR PRAIRIE
OIL COMPANY**

Liquefied Petroleum Gas Division
Sinclair Bldg. Tulsa, Oklahoma

Refineries and Plants

For Recovery of
Isobutane
N-Butane
Propane



ARE YOUR FILES
COMPLETE
On The Selection Of
VENTED & UNVENTED
BRILLIANT FIRE
GAS HEATERS

now available under
WPB & OPA Regulations

Write for illustrated Circular No. 460
listing available models together with
information on how they can be
bought and sold.

The Ohio Foundry & Mfg., Co.
STEUBENVILLE, OHIO
"Quality Heating Equipment
Since 1846"

LP-Gas Is Made Exception In Appalachian Area

To husband supplies of natural gas in the Appalachian area, pending completion of a new pipeline from Texas to West Virginia, the War Production Board's Office of War Utilities has extended its ban on deliveries to include industrial and commercial users having standby facilities capable of burning any type of fuel other than liquid petroleum gas. The extension of the ban was effective Jan. 12.

Previously, only those consumers with standby facilities for burning bunker oil were limited in their receipts of natural gas to amounts needed to supplement the power generated by their standby equipment.

Amendment of Directive 1 to Utilities Order U-7 imposes the new restrictions during the period from Jan. 12 to March 31. As defined by U-7, the Appalachian area includes Virginia, West Virginia, Maryland, Ohio, Pennsylvania, New York, District of Columbia, and 14 counties of northwestern Kentucky.

Method Given for Pricing Reconditioned, Used Valves

OPA has established a method of price computation for both types of valves as follows:

(1) The maximum price for any reconditioned valve shall not be in excess of 80% of either the original manufacturer's net price to jobbers for the new valve or any other manufacturer's net price to jobbers for a new valve of identical type.

(2) The maximum price for any used valve shall not be in excess of 40% of either the original manufacturer's net price to jobbers for the new valve or any other manufacturer's net price to jobbers for a new valve of identical type.

This is Amendment 69 to Revised Supplementary Regulation 14.

BUTANE-PROPANE New

Distributors for

REGO
LP GAS EQUIPMENT

Hackney
BUTANE-PROPANE CYLINDERS

GAS EQUIPMENT CO., INC.
2620 South Ervay Street, Dallas, Texas
GAS EQUIPMENT SUPPLY CO.

**SPRAGUE
METERS**

for

PROPANE - BUTANE SERVICE

Write for Particulars

**SPRAGUE METER
COMPANY**

Bridgeport, Conn.
Los Angeles, Calif.
San Francisco, Calif.



How To Get The Most Work Out Of Your VIKING PUMPS

If it ever becomes necessary to dismantle your Viking Rotary Pump, do not use thicker gaskets than those originally furnished with the pump when putting it back together again. Use of thicker gaskets will allow end play and slippage, decreasing the pump's capacity and efficiency. In replacing gaskets, be sure they are not broken or leakage may occur. Also be sure that the pump does not bind because of lack of gaskets.

For valuable help in installing, operating and maintaining your pumps, write today for your **FREE COPY** of the Viking Service Manual. It's a handy, illustrated booklet packed full of practical information. Get **EXTRA** wear out of your pumps by giving them **EXTRA** care. The Viking Service Manual tells you how.



**VIKING PUMP
COMPANY**
CEDAR FALLS, IOWA

National Butane Gas Co.

Memphis, Tennessee

OUR THREEFOLD OBJECTIVE:

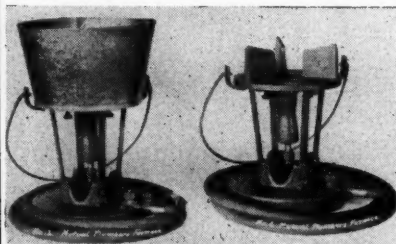
1st, VICTORY

2nd, SERVICE

Last, PROFIT

VICTORY, by building ONLY the equipment deemed essential by the WPB; SERVICE, by remaining in the Butane Gas Business ONLY; PROFIT, the greatest profit of all, The GOOD WILL of our customers.

Mutual's Streamline Portable Plumbers Furnace No. 2-A



This unit is well constructed, efficient and economical. It may be used in the field or shop. It can be adapted to any type of L.P. Gas cylinder. The modern plumbers throughout the country are using this unit. Write for details.

Mutual Liquid Gas Co.

3805 W. Imperial Hwy. Inglewood, Calif.

Order Allows Repairmen To Obtain Copper Tubing

A direction to CMP Regulation 9A provides methods for distributors of automotive equipment, heating equipment and refrigeration equipment to obtain copper tubing to sell to repairmen for use in making repairs to such equipment.

Distributors of such equipment who were in business on Aug. 1, 1943, and sold copper tubing for such repair purposes in 1941, may buy tubing under the newly issued direction. Distributors may buy in any calendar quarter up to 6,000 lbs. of such tubing.

They endorse their orders with the CMP allotment number V-3 and the CMP Regulation No. 7 certification.

Distributors operating under this Direction must observe the restriction of all applicable WPB Orders and Regulations. Attention is called to the provisions of M-9-c and M-9-e-4 which restrict the use of copper.

Truck Certificates Have No Definite Expiration Date

The Office of Defense Transportation has stated that Certificates of War Necessity issued on a yearly basis to truck operators, did not expire on Dec. 31, as some certificate holders are reported to have erroneously assumed.

These Certificates of War Necessity do not bear any expiration date, but specify that they shall remain in effect until amended, suspended, cancelled or revoked. The ODT pointed out that where certificates have been amended, new certificates have been issued.

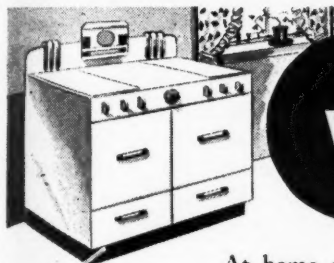
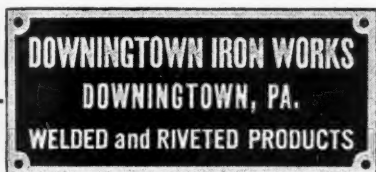
Operators who have not yet received their first quarter 1944 allotments should immediately contact their local War Price and Rationing Board, ODT says.

Specialists IN TANKS

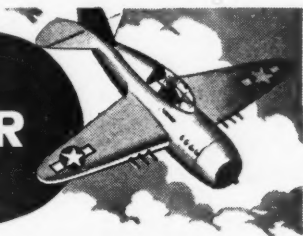
Butane, Propane or Butane-Propane mixture tanks fabricated in accordance with the A.S.M.E. Unfired Code with National Board of Boiler & Pressure Vessel Regulations stamping; also conforming to any special specifications as required by laws of the various states.

All tanks designed to meet National Board of Fire Underwriters for Liquefied Petroleum Gases. Bulk plant storage tanks and truck tanks designed to meet special requirements both as to size and specifications.

Information available without obligation.



IN
WAR OR
PEACE



At home and on the industrial front, a dependable source of Butane and Propane means more satisfied customers. For more than fifty years, through wars and in peace times, Carter has faithfully served. Write our Marketing Department for higher quality Butane and Propane.

DEHYDRATED

PROPANE • BUTANE

The
CARTER
WHOLESALE ONLY *Oil Company*
TULSA, OKLAHOMA

LPGA Publicity Campaign Will Mark New Era For Industry

AFTER the unanimous approval of a publicity campaign for 1944 by the Liquefied Petroleum Gas Association executive board in December, the publicity committee quickly got the program under way on the first of the year.

"Members of the publicity committee regard the enthusiasm in which this publicity campaign is being backed by the industry with a great deal of pleasure," E. Carl Sorby, George D. Roper Corp., chairman of the publicity committee, said. "In his letter to members, Luke Abramson, Jr., association president, stated that he regarded this campaign as one of the most important steps ever taken by the association. It is evident that the members agree with him."

The Lawrence H. Selz Organization, of 221 North La Salle St., Chicago, has been retained to direct the publicity campaign for the LPGA and that firm has scheduled a comprehensive program directed not only at the industry's potential customers but also at the general public. The broad aims are:

1. To build up after-the-war demand for LP-Gas services and appliances.
2. To show the industry's important role in the war effort.
3. To assist all present industry activities, such as return of idle cylinders and equipment.

4. To strengthen the association.
5. To show America the true importance of the liquefied petroleum gas industry, its products and its services.

In addition to releases made direct to newspapers, trade journals, radio stations, etc., stories will be forwarded to companies in the association for their distribution in their own communities. Such articles will be prepared so that the member can insert his own or his company's name in the copy.

Members will be kept informed of the progress of the campaign through letters and bulletins issued by the Selz Organization. In the future, broadsides and folders showing reproduction of clippings and other publicity results will be distributed for use by companies among their dealers and salesmen.

Members of the association's publicity committee who will be in direct charge of the campaign are E. Carl Sorby, George D. Roper Corp., Rockford, Ill.; J. H. De Loria, Skelly Oil Co., Kansas City, Mo.; R. J. Canniff, Servel, Inc., Evansville, Ind.; B. D. Geroy, Illinois Bottled Gas Co., Chicago; C. W. Shugert, Shell Oil Co., Inc., New York; F. F. Campbell, Phillips Petroleum Co., Bartlesville, Okla.; K. H. Koach, Green's Fuel, Inc., Sarasota, Fla., and H. K. Strickler, Prothane Corp., Erie, Pa.



L.C. RONEY, INC.

meets the demands of the nation. Our plant has gone to war for the duration—but when peace comes, L. C. RONEY products for the LP-Gas industry will meet the demands of dealers everywhere. In the meantime—our stock of LP-Gas equipment is still complete.

L.C. RONEY, INC.
1740 44th ST. • LOS ANGELES, CALIF.

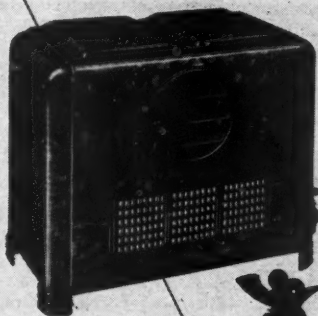


ROBERTSHAW Coast-to-Coast Radio Programs are teaching millions of range prospects the value of Robertshaw Oven Heat Controls.

**ROBERTSHAW
THERMOSTAT CO.
YOUNGWOOD, PENNA.**

Bu-Pro-Fire Gas Heaters

A GOOD NAME TO REMEMBER FOR GREATER HEATING EFFICIENCY WITH LIQUEFIED PETROLEUM GASES.



DESIGNED ESPECIALLY
FOR L. P. GASES

S. TENNESSEE ENAMEL MFG. CO.
NASHVILLE 9, TENNESSEE

New Rates Authorized For Appliance Repairs

To help maintain an adequate supply of repair services, the OPA has issued a new regulation to permit some establishments to raise prices.

The order covers all maintenance work and repair of gas and other appliances and is No. 22 to Maximum Price Regulation 165, amended.

HOT *Water* UNITED STATES

Automatic Water Heaters

Approved by A.G.A. for
Liquefied Petroleum Gas

United States Heater Co.
COMPTON, CALIFORNIA

TANKS

*In the Pacific Northwest
See*

King Bros., Inc.

For Your Tank and
Cylinder Requirements

3500 S. E. 17th Ave., Portland, Ore.

Victory Is Everyone's Job ELECTRIC & CARBURETOR ENGINEERING CO.

"Pioneers of the Butane Industry"

For the duration of the war we are engaged 100% in manufacturing AIRCRAFT PRECISION PRODUCTS. After the war we will again present our regular lines and solicit your patronage.

**ELECTRIC & CARBURETOR
ENGINEERING CO.**

2323 E. 8th St. Los Angeles

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Classified advertising is set in 6-point type, without border or display, at the rate of 10 cents per word per insertion; minimum charge per insertion \$2. Box numbers for replies count as 5 words. Count as a word each one letter word and each group of figures. Classified advertising is only accepted when payment accompanies order. Copy and payment must reach publisher's office prior to 10th of month preceding publication.

HELP WANTED

WANTED—COMBUSTION ENGINEER—A major oil company with continent-wide operations wants to employ a graduate engineer with practical experience in the combustion field. Should possess sound knowledge of the gas industry, both domestic and industrial application. Experience in liquefied petroleum gas preferred. This is a permanent position at a good salary. In your reply, state your experience, education, age, draft status, and the salary you expect. Replies strictly confidential. If employed in essential war work, availability certificate required; if already working at your highest skill, do not apply. Box 240, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

EQUIPMENT WANTED

FOR CASH—GOOD USED TANK TRUCK or truck and trailer, approximately 4,000 gallons up. High or low pressure. Box 664, San Ysidro, Calif.

WANTED—USED 18,000 GALLON OR larger, Propane tank. Also pump for unloading railroad tank cars. P.O. Box 1071, Rapid City, S. D.

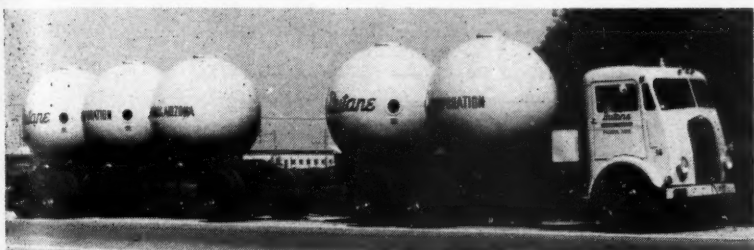
WANTED—BUTANE OR PROPANE CAR-load storage tanks, preferably 15,000 gallon tank. Write Montana Butane Gas Company, Billings, Montana.

BUSINESS OPPORTUNITY—OFFERED

PROFITABLE GOING BUSINESS, PROPANE and butane, wholesale and retail. Annual gallonage 3 million. No emergency jobs, all normal peacetime business. Established 10 years. Operating own transportation system. Present owner wants to retire. Fifty thousand will handle, balance can be financed out of profits. Owner would retain part interest, if so desired by buyer. Inquire Box 235 BUTANE-PROPANE News, 1709 West Eighth St., Los Angeles 14, Calif.

BUSINESS OPPORTUNITY—WANTED

CAPABLE, EXPERIENCED MAN INTERESTED in buying small Butane business in California. Write particulars. L. O. McClure, 1012—24th Street, Bakersfield, California.



CORRECT MOUNTING WILL SAVE TRUCKS and TIRES

COMPLETE ENGINEERING IN LOAD DISTRIBUTION, AND
THE MOUNTING OF YOUR TANKS EXPERTLY DONE BY

ADVANCE AUTO BODY WORKS

DIVISION OF

Superior Tank & Construction Co.

Phones: AN-4157
Night: WH-413-407

6155 So. Eastern Ave.
Los Angeles, California

A phone call will bring a representative to discuss your needs.



THOMAS Appliance Truck for Easy Cylinder Handling

- ALSO FOR STOVES, BOXES, CRATES
- PNEUMATIC RUBBER TIRES

An all purpose, one man truck for moving both cylinders and appliances. No more back-breaking lifting, either. Tapered body gives operator ample room between handles. Cradle construction accommodates any size cylinder up to 100 pound capacity. Wide Bottom flanges give support for appliances. Web strap (optional) holds appliance rigidly. Rounded handle grips permit skidding from end of delivery truck. Time saving, labor saving, cost cutting. Available now.

Write for prices and folder.



THOMAS TRUCK & CASTER COMPANY

4469 Mississippi River, Keokuk, Ia.

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